INSPIRED BY COMFORT

Dometic MarineAir®

PRODUCT GUIDE

FOR LEISURE BOATS, WORKBOATS, AND COMMERCIAL AND MILITARY VESSELS

Includes Specification Sheets for:

Direct Expansion and Chilled Water Air Conditioning, Controls, and Accessories, Eskimo Ice Systems, Spot Zero Water Purification, and Dometic Livos Ship-Wide Ventilation Systems

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Understanding Air Conditioning

The basic principle of any air conditioner is the transfer of heat from one element to another. In a seawater-cooled air conditioner, heat is transferred from the cabin air to the refrigerant gas to the seawater. In heating mode, the refrigerant flow is reversed and heat is transferred from the seawater to the refrigerant gas to the cabin air.

In addition to lowering the air temperature, moisture (humidity) is also removed. Drier air feels more comfortable, helps keep the boat dry, and reduces mold growth and other moisture-related problems.

The Effects of Seawater Temperature

The efficiency of the system is dependent on both the seawater and cabin temperatures. In cooling, the air conditioner works best when the seawater temperature is below 90°F (32°C). At higher water temperatures the unit will operate, but at reduced capacity. As the water temperature rises, so does the refrigerant gas pressure. A high-pressure safety switch will shut the unit down if the water temperature gets too hot, or there is a loss of cooling water flow.

In heat mode, the opposite is true. As the seawater temperature gets colder, there is less heat available and heating performance drops. Full heating capacity is available in water temperatures as low as 55°F (13°C), but drops to about 50% capacity in 40°F (4.4°C) water. Below this, the refrigerant pressure can be so low that the unit will not produce heat, (or may shut down on low-pressure fault, if this option is installed).

The Three Types of Marine A/C Systems

Self-Contained DX Systems (see Figure 1)

- All major components are mounted on a single chassis installed in the living area — usually under a bunk or settee or in a locker.
- A single unit can cool one cabin or it can be ducted to two or more cabins to save space and cost.
- Best choice for boats under 40 ft. (12 m) due to lower cost of units and available installation space.

Split-Gas DX Systems (see Figure 2)

- Major components are split between two units that are installed in different locations and connected by insulated, copper refrigerant tubing.
- Condensing unit (compressor, seawater condenser, and electrical components) mounts in engine room or other mechanical space.
- Evaporator unit installs in living area(s). Two evaporators can connect to one condensing unit to cool multiple cabins or a single large area.
- Evaporators require less space in the living area and are quieter because they do not have a compressor.
- Ideal for boats up to 80 ft. (24 m). Maximum length of refrigerant tubing between the condenser and air handlers is 50 ft. (15 m) and system must be charged with refrigerant by a certified technician.

Chilled Water Systems (see Figure 3)

- Chiller unit in the engine room cools (or heats) fresh water that is pumped through an insulated piping loop to air handlers located in the living spaces that cool (or heat) the air.
- Chillers offer flexible load management and a reduced peak electrical load.
- Best for boats over 80 ft. (24 m). There is no limitation on the number of air handlers in a system, or on the distance from the chiller to the air handlers.

Figure 1: Self-Contained Air Conditioning

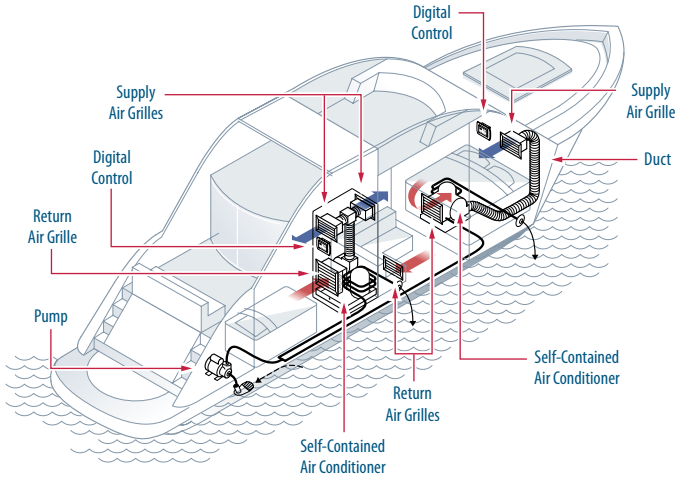


Figure 2: Split-Gas Air Conditioning

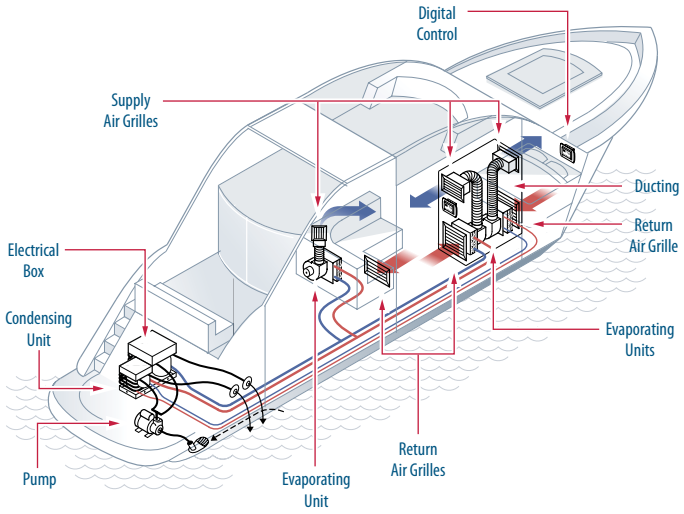
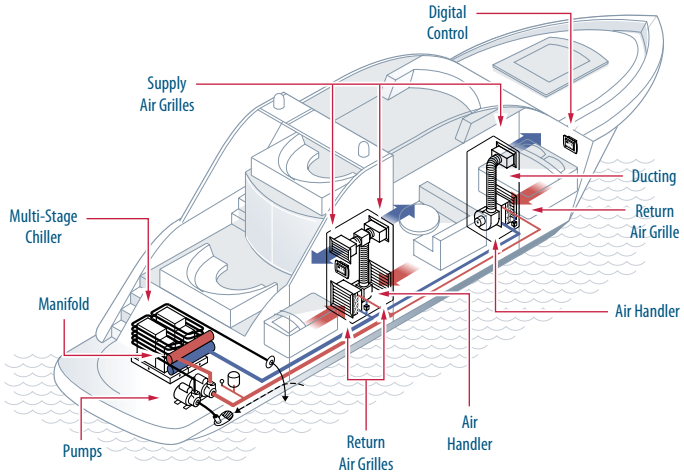


Figure 3: Chilled Water Air Conditioning



Factors That Determine the Type of Air Conditioning System You Need

1. Size and layout of the boat for calculating required system capacity.
2. Access for routing tubes/wires/hoses.
3. Location of furnishings.
4. Storage space to sacrifice.
5. Cost.

How to Size Your A/C System

Step 1: Find the required capacity by dividing the vessel into three main load areas:

- **Below Deck**: Cabins where the hull slopes inward toward the keel with minimal port lights and hatches.
- **Mid Deck**: Areas on main deck with small or shaded windows.
- **Above Deck**: Areas with large glass surfaces and direct sunlight.

Multiply the length and width of each cabin to be treated to determine the area in square feet or square meters. It is assumed the boat has an average headroom of about 6.5 ft. (2 m) with an average amount of furniture. If one end of the cabin is narrower than the other, take your measurement in the middle.

Using Table 1, multiply the area of each cabin by the appropriate load factor to find the required air conditioner capacity. For example, if your boat is in a temperate climate and you are measuring in square feet, you would multiply your total below-deck area by 60, your mid-deck area by 90, and your above-deck area by 120. (A temperate climate generally has 95°F (35°C) air and 85°F (35°C) water with moderate humidity; a tropical climate averages 105°F (41°C) air and 95°F (35°C) water with high humidity.)

Table 1: Load Factors (BTU/hr per ft²)

Climate	Below-Deck Load Factors	Mid-Deck Load Factors	Above-Deck Load Factors
Temperate	60	90	120
Tropical	80	120	150

Step 2: Taking into account the boat's size and layout, determine the number of self-contained systems or air handlers needed.

Find out which cabins or areas will benefit best from a dedicated thermostat control, and which cabins can be served by ducting or a secondary air handler (where the only temperature control is an adjustable grille or fan-speed control).

Step 3: Taking into account the boat's size and layout, determine the location of each self-contained system or air handler.

In addition to leaving enough room for plumbing and ducting, there must also be sufficient space in each installation location for servicing and/or removal of the unit.

A self-contained unit or air handler must have an open return-air path. However, the return-air grille does not need to be directly in front of the unit. In fact, the system will be less noisy if there is an indirect path for the return air to follow. ***Never install the unit in the bilge or engine room or where vapors from these areas could reach the unit.***

A self-contained unit or air handler must be located so the discharge ducting can be routed to a high point in the cabin. Rotate the blower to create the most direct path for routing the discharge duct. Poor airflow may result from a ducting run of over 15 ft. (4.5 m) or a ducting run with many bends. Plan for the shortest possible ducting run while limiting the number of bends.

Step 4: Seawater Components. Use one pump of adequate capacity for all air conditioning systems on board. The basic rule is 180 gallons (681.4 liters) per hour (3 GPM/11.4 LPM) of water per ton of air conditioning (one ton = 12,000 BTU/hr). If more than one system shares a common pump, you will also need a pump relay and manifold.

The BTU/hr capacity in Table 2 shows recommended seawater flow rates and minimum inlet (through-hull) sizes.

Table 2: Pump Sizing Chart by BTU/hr Capacity

System Capacity (BTU/hr)	Seawater Flow Rate[3] (GPH/LPH)	Through-Hull Inlet Size (in/mm)
5,000 - 12,000	180/681	0.50/13
16,000 - 24,000	360/1363	0.75/19
30,000 - 48,000	720/2726	1.00/25

[3] Allow for a reduction in capacity of 17% if using a 60Hz pump at 50Hz.

Step 5: Determine the proper duct diameter (Ø) and grille sizes for your air conditioning system. Use Table 3 to find the correct sizes, which are based on the system's BTU/hr capacity.

Table 3: Duct and Grille Sizing Chart by BTU/hr Capacity

Air Handler (BTU/hr)	Duct Ø (in/mm)	Return-Air Grille (ft^2/cm^2)	Supply-Air Grille (ft^2/cm^2)
4,000	4/102	64/413	32/206
6,000	4/102	64/413	32/206
9,000	6/152	98/632	49/316
10,000	6/152	100/645	60/387
12,000	6/152	130/839	70/452
16,000	7/178	160/1,032	80/516
18,000	7/178	200/1,290	100/645
24,000	9/229	240/1,548	140/903
30,000	10/254	350/2,258	170/1,097
36,000	10/254	360/2,323	196/1,265

Other A/C System Components

A complete air conditioning system requires controls, a seawater cooling system, an air-distribution system and electrical connections.

Controls

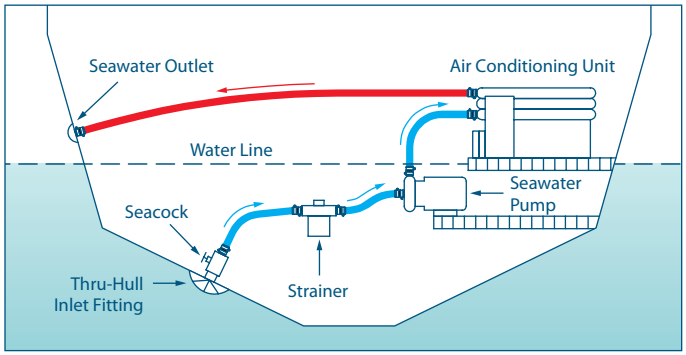
There are two types of controls: digital and electro-mechanical switch.

- **Digital**: These keypad/displays are part of a microprocessor system with many advanced functions, including automatic fan-speed control, fault display, and a dehumidification program. Decorative bezels can be added to complement the vessel's interior decor.
- **Mechanical**: These manual switches with two or three rotary knobs control the mode of operation, thermostat, and variable fan speed. Reverse-cycle models have automatic changeover between heating and cooling.

Seawater Cooling System

The seawater cooling system brings seawater into and through the system then discharges it overboard. It consists of an inlet through-hull fitting, seacock (water valve), strainer, pump, and overboard discharge fitting, all connected by hose or piping (see Figure 4).

Figure 4: Correct Plumbing of a Seawater-Cooling System



If multiple air conditioning units are served by a single seawater pump, then a pump relay and water manifold are required. A centrifugal seawater pump is recommended for efficient, quiet operation and long life. Centrifugal pumps are not self-priming and must be mounted below the water-line (install a self-priming pump for shallow-draft boats).

It is important that the seawater plumbing be self-draining, meaning that if the boat is lifted, all water in the piping will drain out. An air conditioning system plumbed this way will have no air locks which could disrupt the flow of seawater.

Air-Distribution System

In cooling mode, warm cabin air is drawn into the self-contained unit or air handler through a return-air grille. It is then cooled and blown through flexible insulated duct and back into the cabin through a supply-air grille installed high in the cabin. The supply-air grille should be installed away from the return-air grille to ensure good circulation.

Plenums, or transition boxes, can be installed in the duct to split the air flow into multiple ducts to serve one or more cabins.

Figure 5: Installation of a Self-Contained System Under a Bunk

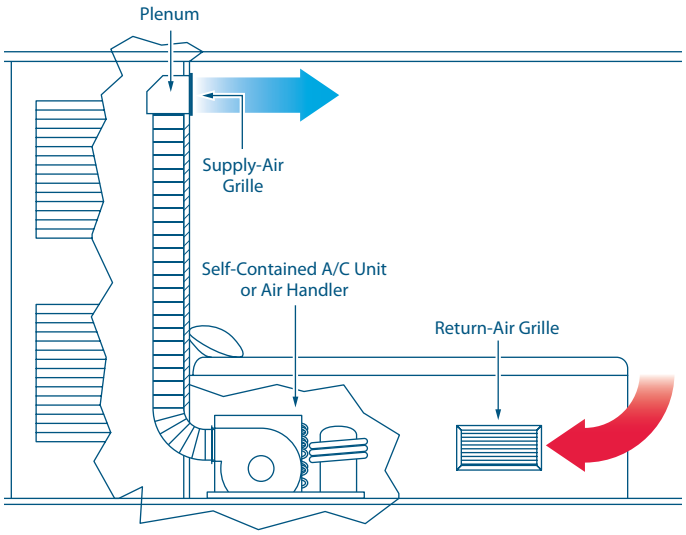
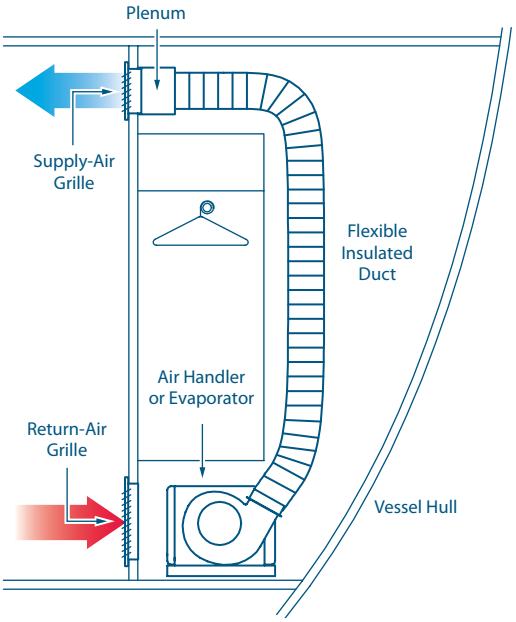


Figure 6: Installation of An Air Handler In a Closet



Electrical Connections

Marine Air air conditioning systems are available for use with common power supplies throughout the world. In the United States and most of North and South America, the systems are 115 or 230VAC, 60Hz, single phase. In Europe and most of Asia, systems are typically 230VAC, 50Hz, single phase.

Running and starting loads of an A/C system are often the largest electrical loads on a boat. It is important that the power supply system is large enough to handle these loads, and is installed properly. Always follow local codes or ABYC codes for proper wiring guidelines. Contact a Marine Air dealer if you have any special power requirements.

The voltage rating of an air conditioner is a nominal rating. The actual voltage in a given location may be higher or lower by as much as 10% and the system will run fine. Table 4 below shows nominal compressor ratings and the acceptable range of available power.

Table 4: Compressor Electrical Specs

Nominal Rating	Acceptable Range
230V/60Hz/1-ph.	208-240V/60Hz/1-ph.
220V/50Hz/1-ph.	220-240V/50Hz/1-ph.
230V/60Hz/3-ph.	208-230V/60Hz/3-ph. and 190-220V/50Hz/3-ph.
220V/50Hz/3-ph.	200-220V/50Hz/3-ph.
460V/60Hz/3-ph.	440-480V/60Hz/3-ph. and 380-420V/50Hz/3-ph.
380V/50Hz/3-ph.	380-420V/50Hz/3-ph.

Using a Generator

If running your boat's electrical systems on a generator, make sure the generator can handle the large starting inrush current of the air conditioning compressor. Use of a Dometic SmartStart™ Soft Starter is highly recommended to smooth out the compressor startup power demand and ease strain on the generator.

Take the product specification sheets to your generator supplier and ask for their help.

Patented Technology

Vector Turbo Series Boat Air Conditioning

Powerful, Quiet & Compact With No Drain Pan Worries

The Vector Turbo series completely revolutionized self-contained boat air conditioning (cooling and heating) with patented innovations in marine air conditioning system design, winning the IBEX Innovation Award in 2007.

The rust-free molded composite drain pan has three drains for the rapid removal of condensate water. The drain pan has a small footprint for installation flexibility.

A vibration-isolation mounting system results in significantly quieter, virtually vibration-free performance. The enclosed blower motor eliminates overhang for reduced depth.

The Turbo series was specifically engineered to harness and maximize the impressive performance of R-410A, a proven and environmentally safe refrigerant gas.

The optional Turbo sound cover provides up to 50% further noise reduction. This compact, easy-to-install sound cover completely encases the compressor to provide a 3- to 5-dB reduction in noise. Available for all Turbo models, the sound cover installs in minutes. Mounting hardware is included.

Vibration-isolation mounting clips reduce vibration and noise.

Optional sound cover further reduces compressor noise by up to 50%.

Key Benefits

- Prevents critical components from overheating
- Cools electronics and other equipment
- Powerful, compact, and quiet self-contained system
- Water-cooled system with marine-optimized design
- Simple installation with no ducting needed
- Rotatable blower
- Stainless-steel drain pan
- Three drain points for rapid removal of condensate water
- Simple Passport I/O control with special 85°-105°F set point mounted on unit

Product Testimonial

"There is very little noise coming from the compressor, and vibrations are practically non-existent. I highly recommend this unit."

— Bob Silverman, boat owner

MARINE AIR SYSTEMS®
AIRRRRRRR
by Dometic GROUP

Specifications for Vector Turbo Series Boat Air Conditioning

Model [1]	VTD6			VTD8			VTD10			VTD12			VTD16		
Capacity (BTU/h) [2]	6000			8000			10000			12000			16000		
Voltage (V)	115	230	240	115	230	240	115	230	240	115	230	240	115	230	240
Cycle (Hz) [3] /Phase (Ph)	60/1		50/1	60/1		50/1	60/1		50/1	60/1		50/1	60/1		50/1
Full Load Amps (FLA) Cool (A)	4.6	2.2	2.7	5.5	3.1	3.2	6.7	3.3	3.2	8.7	4	3.3	10.4	5.1	4.5
Full Load Amps (FLA) Heat (A)	5.9	2.8	3.7	7.1	4	4.1	8.8	3.9	4.3	10.9	5.1	4.3	13.6	6.6	5.9
Full Load Amps (FLA) Blower (A)	0.8	0.36		1.31	0.7	0.83	1.14	0.61	0.48	1.14	0.61	0.48	1.61	0.78	0.56
Locked Rotor Amps (LRA) (A)	36	17.7		36	17.7		42	22	21	58	28	21	62	34	22
Max. Circuit Breaker (A)	15	10		20	10		25	15	10	30	15	10	40	20	15
Min. Circuit Ampacity (A)	12	7	6	13	7		16	10	8	20	11	8	25	12	11
Refrigerant Type	410A			410A			410A			410A			410A		
Min. Height (in/mm) [4]	10.8/275			10.8/275			12.2/310			12.2/310			12.9/328		
Max. Height (in/mm) [4]	11.1/282			11.1/282			13/331	12.5/318		12.5/318			13.4/341		
Height w/Opt. Sound Cover (in/mm) [4]	13.4/341			13.4/341			14/356			14/356			14/356		
Width (in/mm) [4]	17.6/448			17.6/448			20.4/519			20.4/519			21.4/544		
Max. Depth (in/mm) [4]	10.7/272			10.7/272			12.4/315			12.4/315			13.3/338		
Min. Supply Duct Size (in/mm)	4/102			5/127			6/153			6/153			7/178		
Min. Supply Air Grille Size (sq in/sq cm)	32/207			48/310			60/388			70/452			80/517		
Min. Return Air Grille Size (sq in/sq cm)	64/413			80/517			100/646			130/839			160/1033		
Seawater Inlet Connection (in/mm)	⅝ /16			⅝ /16			⅝ /16			⅝ /16			⅝ /16		
Net Weight (lbs/kg) [5]	42.5/14.6	33/14.1	42.5/19.3	45.55/20.7	36/16.4		47.7/21.7	50.5/22.1	45/20.5	47/21.4	52/23.6	46/20.9	60/27.3	53/24.1	58.25/26.5
Gross Weight (lbs/kg) [5]	50.25/18.2	41/18.6	50.75/23.1	53.75/24.4	44/19.1		57.5/25.8	59.5/26.1	53/24.1	55/24.1	61/27.7	54/24.5	69.5/31.6	61/27.7	67.75/30.8
Height-Electrical Box (in/mm)	8.8/224			8.8/224			8.8/224			8.8/224			8.8/224		
Width-Electrical Box (in/mm)	6.5/166			6.5/166			6.5/166			6.5/166			6.5/166		
Depth-Electrical Box (in/mm)	2.7/69			2.7/69			2.7/69			2.7/69			2.7/69		

[1] Add a 'Z' for 230V/60Hz units or 'Z50' for 240V/50Hz units. For example: VTD8K=115V/60Hz; VTD8KZ=230V/60Hz; VTD8KZ50=240V/50Hz

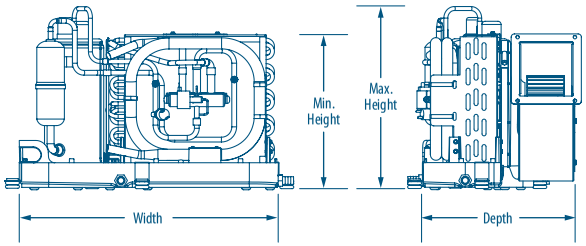
[2] BTU and electrical data are based on a 45°F/7.2°C evaporator and 100°F/37.8°C condenser in cool mode, and a 45°F/7.2°C evaporator and 130°F/54.4°C condenser in heat mode.

[3] 60Hz units must not operate at 50Hz and 50Hz units must not operate at 60Hz unless data plate states otherwise.

[4] All dimensions ± 0.30 in. (8 mm).

[5] All weights ± 10%

Dimensions



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L-2502C Rev. 20130726

Specifications and availability subject to change without notice.

Environmentally Responsible

Assembled in the USA

Dealer

Powered by Batteries

Cuddy dc Boat Air Conditioning Kit

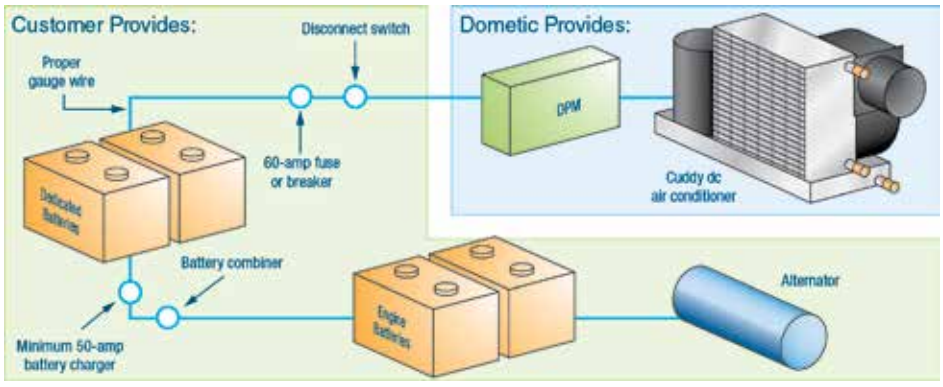
Easy & Affordable DC-Powered Air Conditioner

The Cuddy dc kit includes a 3,500 BTU/hr self-contained air conditioner, pump, electro-mechanical control, and dedicated power module (DPM)

The Cuddy dc is a compact 3,500 BTU/hr cool-only air conditioner designed to work with 12V power systems. Energized by a dedicated bank of batteries and a dedicated power module (DPM), the Cuddy dc makes your small cabin a refuge from the heat and sun. Compact—about the size of a typical battery box—this low-profile unit easily fits beneath a V-berth or in a storage area below deck. The Cuddy dc uses R-134A, a globally accepted, environmentally safe refrigerant.

The customer's dedicated 12V DC battery bank powers the system via the DPM, which is included with the Cuddy dc kit. Two ABYC-approved wires (sized properly for your unique installation) run from the dedicated battery bank to the DPM. Easy-to-use polarized plugs connect the DPM to the seawater pump and the Cuddy dc unit. Optional cables are available for longer runs if your setup requires more than the standard 4.5 ft. (1.37 m) cable included with the kit.

To operate the system, the Cuddy dc uses a simple two-knob mechanical control. Since it draws no power itself, the mechanical control maximizes runtime and efficiency. The Cuddy dc system (compressor, blower, and pump) draws about 29 amps of DC power under normal operating conditions. Supplemental DC power comes to you via engine power (if available) or via shore power through a battery charger.



The customer must provide the right type of batteries and battery charger. Use only deep-cycle AGM or gel-cell batteries. Do not use wet-cell batteries. The battery charger must be rated for the type of battery you use. The Cuddy dc requires a dedicated battery bank. To maximize runtime, we recommend using at least two batteries in the bank. The more cells, the longer the runtime. All batteries used must be of the same type - all AGM or all gel-cel - and the same age.

Key Benefits

- Designed for small cabins
- Operates via simple 12V DC connection
- 3,500 BTU/hr cool-only system
- Compact - about the size of a battery box
- High-velocity blower with split capacitor for greater airflow
- Stainless-steel chassis
- Simple two-knob mechanical control maximizes efficiency and runtime
- Minimal DC draw - about 29 DC amps total
- No genset needed
- Air distribution kits available

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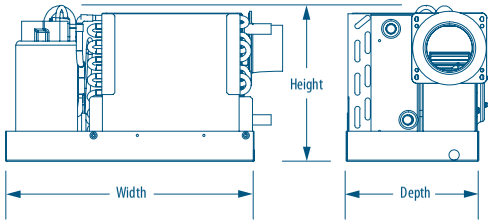
Specifications for Cuddy dc Boat Air Conditioning Kit

Model	Cuddy Cool CD3.5HV	Dedicated Power Module (DPM)	MCP 2-Knob Control	PML150 Seawater Pump
Capacity (BTU/h)	3500	N/A	N/A	N/A
Amps @ 12V DC (A) [1]	29	N/A	N/A	N/A
Refrigerant Type	134A	N/A	N/A	N/A
Height (in/mm)	9.25/235	5.13/131	5.5/140	2.75/70
Width (in/mm)	15/381	10/254	3.25/83	3.5/89
Depth (in/mm)	8/204	2.67/68	2.75/70	4.75/121
Net Weight (lbs/kg)	29/13.2	3/1.4	2/0.1	TBD

[1] Approximate value shown and includes amp draw for the compressor, blower, and seawater pump. Actual load is dependent upon humidity, seawater temperature, battery condition, voltage, and the integrity of the electrical connections.

Dimensions



Accessories for Cuddy dc Kits

- 10 ft. (3 m) DPM to Cuddy extension cable
- 20 ft. (6 m) DPM to Cuddy extension cable
- 10 ft. (3 m) pump to Cuddy extension cable
- Air distribution kit in black (includes 3 in. (76 mm) supply air grille, 8x8 in. (203x203 mm) return air grille, and 10 ft. (3 m) of flexible insulated duct)
- Air distribution kit in white (includes 3 in. (76 mm) supply air grille, 8x8 in. (203x203 mm) return air grille, and 10 ft. (3 m) of flexible insulated duct)

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L-2425C Rev. 20140117

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Only 8 in. High

Dash Air Low-Profile Boat Air Conditioner

Designed for Unique & Height-Restrictive Installations

The Dash Air low-profile self-contained boat air conditioner is designed for unique applications. Thanks to the innovative horizontal compressor and dual high-velocity tangential blowers, it can be installed in height-restrictive spaces, making it ideal for flybridge, cockpit, engine room, or exterior deck installations.

The Dash Air delivers 16,000 BTU/hr of cooling and heating in a package that stands just eight inches (203 mm) high. The dual blowers can be ducted to different areas or to confined areas such as flybridge dashboards and consoles.

Dash Air features an oversized four-row evaporator coil for excellent heat removal under low fan-speed conditions. A highly efficient blower reduces power consumption, and the blower flows to two outlets.

Dash Air is available as a low-profile evaporator only (EDLE units) to work with Marine Air R-410A remote condensers.

Thanks to the unique horizontal compressor, these low-profile units stand only 8 in. (203 mm) high.

Key Benefits

- Stands only 8 in. (203 mm) high
- Unique horizontal compressor
- 16,000 BTU/hr cooling and heating
- High-efficiency, ductable dual tangential blowers
- Ideal for flybridge, cockpit, and on-deck installations
- Engineered to maximize the performance of R-410A, an environmentally safe refrigerant
- 304-grade stainless-steel drain pan for long service life
- Stainless-steel condensate drains for excellent water removal
- Electrical box can be remotely mounted up to 5 ft. (1.52 m)
- Special corrosion-resistant coating on blower and housing
- Oversize four-row evaporator coil for excellent heat removal under low-fan speed conditions
- Available as low-profile evaporator only (EDLE units) to work with Marine Air remote condensers

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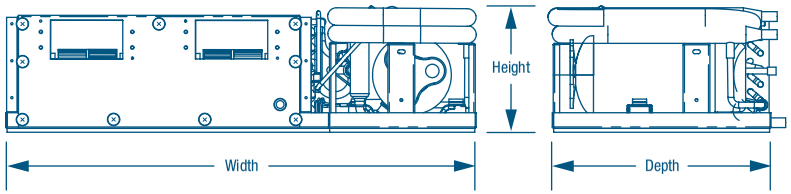
Specifications for Dash Air Low-Profile Boat Air Conditioner

Model [1]	VLD16			EDLE16	
Capacity (BTU/h) [2]	16000			16000	
Voltage (V)	115	230	240	115	230
Cycle 1 (Hz)	60		50	60	
Cycle 2 (Hz)	N/A			50	
Phase (Ph)	1			1	
Full Load Amps (FLA) Cool (A)	12.8	4.7	4.42	1.5	0.62
Full Load Amps (FLA) Heat (A)	15.5	6.2	5.82	N/A	
Full Load Amps (FLA) Blower (A)	2	0.86	0.62	2	0.86
Locked Rotor Amps (LRA) (A)	63	29	26	N/A	
Max. Circuit Breaker (A)	40	20	15	5	
Min. Circuit Ampacity (A)	24	14	11	2	1
Refrigerant Type	R410A	410A		N/A	
Height (in/mm) [3]	8/204			7.4/188	
Width (in/mm) [3]	30.25/769			22.25/566	
Depth (in/mm) [3]	14/356			11/280	
Min. Supply Duct Size (in/mm)	7/178			7/178	
Min. Supply Air Grille Size (sq in/sq cm)	80/517			80/517	
Min. Return Air Grille Size (sq in/sq cm)	160/1033		106/684	160/1033	
Seawater Inlet Connection (in/mm)	⅝ /16			N/A	
Net Weight (lbs/kg) [4]	70/31.8	65/29.5	72.25/32.8	19/8.7	
Gross Weight (lbs/kg) [5]	80/36.3	73/33.2	81.75/37.1	29/13.2	

[1] VLD indicates low-profile self-contained units. EDLE indicates low-profile evaporator-only units.
[2] BTU and electrical data are based on a 45°F/7.2°C evaporator and 100°F/37.8°C condenser in cool mode, and a 45°F/7.2°C evaporator and 130°F/54.4°C condenser in heat mode.
[3] All dimensions ± 0.30 in. (8 mm).
[4] All dimensions ± 10 mm
[5] All weights ± 10%

Dimensions



Air Distribution Accessories for Dash Air

- #220000005 – PLNM AMN RA VLD16/2@5 in. Side Discharge Plenum
- #220000006 – PLNM AMN RA VLD16/2@5 in. Upward Discharge Plenum
- #220000007 – PLNM AMN RA VLD16/2@5 in. Downward Discharge Plenum
- #228700089 – Ring ABS trans 5 in. – OB Short Flange

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Now With R-410A

Vector Compact Series Boat Air Conditioning

High-Capacity Air Conditioning In a Compact Package

The 27,000 BTU/hr Compact unit with painted galvanized metal chassis

The Vector Compact series of self-contained marine air conditioners offers 18,000 and 27,000, and 30,000 BTU/hr of reverse-cycle cooling and heating.

These high-capacity units were engineered to harness and maximize the impressive performance of environmentally safe R-410A refrigerant. Used in the HVAC industry for more than 10 years, R-410A is proven and reliable, complies with all EPA standards, and is accepted worldwide.

All models offer direct expansion operation in a compact, low-profile unit, with a seawater-cooled condenser and choice of controls. Vector Compact units are designed for installation under a settee or berth, in a locker or cabinet, or other convenient location.

Vector Compact systems feature high-velocity (HV) blowers. All blowers are insulated to prevent secondary condensation, and are fully rotatable for flexibility during installation. A painted galvanized metal chassis is standard on 18K and 27K models; a stainless-steel chassis upgrade is available for enhanced durability.

The SVCD30 features dual evaporator coils and a single compressor on a compact stainless-steel chassis. The dual high-velocity (HV) blowers can be ducted to two or more interior spaces.

The dual-blower 30,000 BTU/hr unit with stainless-steel chassis.

Key Benefits

- Compact design reduces unit size by up to 25% of the original Vector Rotary's size
- High-velocity (HV) fully-insulated blowers are rotatable
- Blowers are rotatable and fully insulated
- Patented design increases cooling capacity and dehumidification
- Engineered to maximize the performance of R-410A, an environmentally safe refrigerant
- Unique compressor and reversing valve mounting reduces vibration
- Electrical box is installed within unit footprint on 18K and 27K models; remotely mounted for 30K models
- High-efficiency rotary and scroll compressors are quiet and more reliable
- Condenser coil's cupronickel-encased copper condenser coil provides maximum heat transfer and high resistance to corrosion
- Evaporator coil employs an enhanced fin design and rifled copper tubing to provide maximum capacity
- 27K and 30K models available in 3-phase power on a special order basis

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Specifications for Vector Compact Series Boat Air Conditioning

Model [1]	VCD18			VCD27		SVCD30	
Capacity (BTU/h) [2]	18000			27000		30000	
Voltage (V)	115	230	220	230	220	230	380
Cycle (Hz) [3] /Phase (Ph)	60/1		50/1	60/1	50/1	60/1	50/3
Full Load Amps (FLA) Cool (A)	11.1	6.4	5.7	8	7.6	9.7	4.96
Full Load Amps (FLA) Heat (A)	15.1	8.3	7	11.2	11	12.8	5.96
Full Load Amps (FLA) Blower (A)	1.93	1.15		1.64		1.76	1.56
Locked Rotor Amps (LRA) (A)	66	32	26	58.3	60	53	38
Max. Circuit Breaker (A)	45	20		45	40	35	15
Min. Circuit Ampacity (A)	27	13		27	24	21	10
Refrigerant Type	410A			410A		410A	
Height-Coil (in/mm) [4]	14/356			18/458		N/A	N/A
Height-Blower (in/mm) [4]	15.5/394			19.25/489		N/A	N/A
Height-Compressor (in/mm) [4]	N/A			N/A		16/407	
Width (in/mm) [4]	21/534			24.75/629		25/635	
Depth (in/mm) [4]	12/305			15.25/388		23/585	
Min. Supply Duct Size (in/mm)	7/178			8/204		5/127	
Min. Supply Air Grille Size (sq in/sq cm)	100/646			140/904		150/968	
Min. Return Air Grille Size (sq in/sq cm)	200/1291			240/1549		250/1613	
Seawater Inlet Connection (in/mm)	⅝ /16			⅝ /16		⅝ /16	
Net Weight (lbs/kg) [5]	64/29.1	69.45/31.6	64/29.1	120/54.5		108.25/49.2	TBD
Gross Weight (lbs/kg) [5]	73/33.2	81/36.8	73/33.2	130/58.1		126.5/57.4	TBD

[1] 'SVC' indicates stainless-steel chassis, 'VC' indicates painted galvanized metal chassis. 'D' in the model number indicates a digital control. Replace with 'M' for units with mechanical control. Add a 'Z' or 'Z50' after the capacity designator for 230V/60Hz or 220V/50Hz units, respectively. Examples: VCD18K = 115V/50Hz; VCD18Kz = 230V/60Hz; VCD18KZ50 = 220V/50Hz.

[2] BTU and electrical data are based on a 45°F/7.2°C evaporator and 100°F/37.8°C condenser in cool mode, and a 45°F/7.2°C evaporator and 130°F/54.4°C condenser in heat mode.

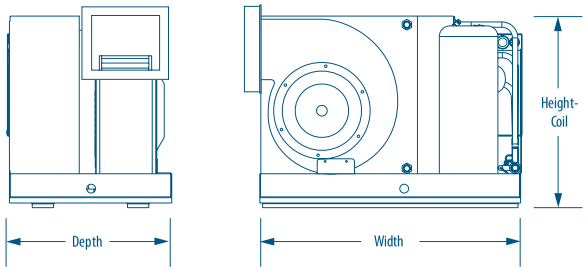
[3] 60Hz units must not operate at 50Hz and 50Hz units must not operate at 60Hz unless data plate states otherwise.

[4] All dimensions ± 0.30 in. (8 mm).

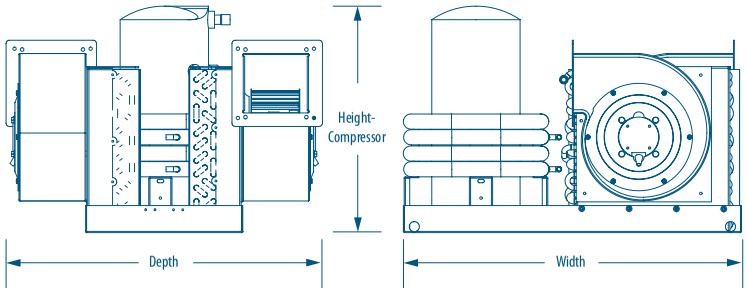
[5] All weights ± 10%

Dimensions

SINGLE-BLOWER 18,000 & 27,000 BTU/HR MODELS



DUAL-BLOWER 30,000 BTU/HR MODEL



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R-410A Green Gas

Emerald Series (6K-16K) Condensers

Innovative Chassis Conquers Installation Challenges

After listening to boat builders, global service teams and boat owners, Dometic engineers designed the innovative Emerald Condenser series to harness and maximize the impressive performance of R-410A refrigerant while meeting all international clean air standards.

The increase in BTU capacity is due primarily to the improved refrigerant metering design. The bi-flow thermal expansion valve for cooling provides up to a 14% increase in system capacity, which, when combined with a separate metering system for heating, attains an increase of up to 10% in heating performance. The amperage reduction of up to 27% is due to the more efficient design of the rotary compressor and properly sized refrigerant components.

The compact design of the Emerald series incorporates built-in vibration-isolating mounts, two large drain connections and numerous mounting options for installation to a smooth deck, stringer or existing rack. The incorporated lifting handles and smooth bottom allows for easy lifting and quick placement of the unit. The molded composite no-rust drain pan is shaped to provide positive drainage even when the boat heaves and rolls. The amount of standing water in the drain pan is reduced by up to 85%, which is 8x times less than a typical drain pan.

Emerald condensers can be installed quickly and easily. The drain, seawater and refrigerant connections are conveniently located to conquer installation challenges thus reducing installation time by up to fifteen minutes. The electrical box can be easily removed and located up to 5 ft. (1.5 m) away, further reducing the size of the unit while making the system more accessible. The reversing valve, pressure switches and service ports are centrally located, high on the unit for access from any side.

The reversing valve, pressure switches, and service ports are centrally located for easy maintenance access from any side.

Vibration-isolating compressor mounting system reduces noise and vibration.

Key Benefits

- Up to 17.5% increase in BTU capacity
- Up to 41% amperage reduction
- Up to 32% reduced start-up amps
- Up to 16% smaller
- Up to 25% lighter
- Up to 85% reduction in standing water in the drain pan
- Up to 15 minutes faster to install
- Square chassis for easy installation in tight spaces
- Three mounting options adapt to installation environments
- Rust-free composite drain pan
- Reconfigurable chassis allows optimal drain connections
- Compressor vibration-isolation mounts minimize noise and vibration
- Built-in refrigerant line filter drier reduces installation time and protects the compressor from moisture and contaminants
- Reversing valve, pressure switches, and service ports centrally located for easy maintenance access from any side
- Engineered to maximize the performance of R-410A, an environmentally safe refrigerant

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Specifications for Emerald Series (6K-16K) Condensers

Model [1]	E*6			E*8			E*10			E*12			E*16		
Capacity (BTU/h) [2]	6000			8000			10000			12000			16000		
Voltage (V)	115	230	240	115	230	240	115	230	240	115	230	240	115	230	240
Cycle (Hz) [3] /Phase (Ph)	60/1		50/1	60/1		50/1	60/1		50/1	60/1		50/1	60/1		50/1
Full Load Amps (FLA) Cool (A)	3.8	1.8	2.4	4.2	2.4		5.6	2.6	2.8	7.6	3.4	2.79	8.8	4.3	3.9
Full Load Amps (FLA) Heat (A)	5.1	2.44	3.3	5.8	3.3		7.7	3.6	3.8	9.8	4.5	3.81	12	5.8	5.3
Locked Rotor Amps (LRA) (A)	36	17.5	17.7	36	17.7		42	22	21	58	28	21	62	34	22
Max. Circuit Breaker (A)	15	10		15	10		25	15	10	30	15	10	40	15	
Min. Circuit Ampacity (A)	11	7	6	11	6		15	9	8	18	10	8	23	11	10
Refrigerant Type	410A			410A			410A			410A			410A		
Water Flow (gpm/lpm)	1.5/5.7			2/7.6			2.5/9.5			3/11.4			4/15.2		
Max. Height (in/mm) [4]	12/305			12/305			13/331			13/331			14.1/359		
Width (in/mm) [5]	13.3/338			13.3/338			13.3/338			13.3/338			13.3/338		
Depth-Without Elec. Box (in/mm) [5]	13.3/338			13.3/338			13.3/338			13.3/338			13.3/338		
Depth-With Elec. Box (in/mm) [5]	15.1/384			15.1/384			15.1/384			15.1/384			15.1/384		
Seawater Inlet Connection (in/mm)	⅝/16			⅝/16			⅝/16			⅝/16			⅝/16		
Seawater Connection Type	cupranickle tube			cupranickle tube			cupranickle tube			cupranickle tube			cupranickle tube		
Refrigerant Line Connection-Discharge (in)	¼			¼			¼			¼			¼		
Refrigerant Line Connection-Suction (in)	⅜			⅜			⅜			⅜			½		
Net Weight (lbs/kg) [4]	43/19.6		42.05/19.1	43/19.6			45/20.5	44.25/20.1	45/20.5	47/21.4			49/22.3	50.5/22.1	50/22.7
Gross Weight (lbs/kg) [4]	50/22.7		49.5/22.5	50/22.7			52/23.6	50.5/22.1	52/23.6	54/24.5			56/25.5	57/25.9	56/25.5
Height-Electrical Box (in/mm)	8.75/223			8.75/223			8.75/223			8.75/223			8.75/223		
Width-Electrical Box (in/mm)	6.5/166			6.5/166			6.5/166			6.5/166			6.5/166		
Depth-Electrical Box (in/mm)	2.63/67			2.63/67			2.63/67			2.63/67			2.63/67		

[1] Cruisair customers, replace '*' in the model name with 'Q' for Q-Logic digital control system, or 'M' for electro-mechanical control. Marine Air customers, replace '*' in the model name with 'D' for Passport I/O digital control system, or 'M' for electro-mechanical control.

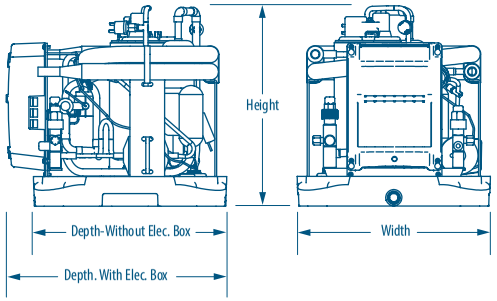
[2] BTU and electrical data are based on a 45°F/7.2°C evaporator and 100°F/37.8°C condenser in cool mode, and a 45°F/7.2°C evaporator and 130°F/54.4°C condenser in heat mode.

[3] 60Hz units must not operate at 50Hz and 50Hz units must not operate at 60Hz unless data plate says otherwise.

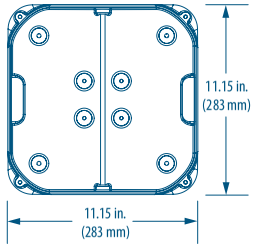
[4] All weights ± 10%

[5] All dimensions ± 10 mm

Dimensions



Top View of Drain Pan To Show Mounting Hole Locations



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Emerald Series (24K-72K) Condensers

Innovative Chassis Conquers Installation Challenges

After listening to boat builders, global service teams and boat owners, Dometic engineers designed the innovative Emerald Condenser series to harness and maximize the impressive performance of R-410A refrigerant while meeting all international clean air standards.

The compact design of the Emerald series incorporates built-in vibration-isolating mounts, two large drain connections and numerous mounting options for installation to a smooth deck, stringer or existing rack. The incorporated lifting handles and smooth bottom allows for easy lifting and quick placement of the unit.The molded composite no-rust drain pan is shaped to provide positive drainage even when the boat heaves and rolls. The amount of standing water in the drain pan is reduced by up to 85%, which is 8x times less than a typical drain pan.

Emerald condensers can be installed quickly and easily. The drain, seawater and refrigerant connections are conveniently located to conquer installation challenges thus reducing installation time by up to fifteen minutes. The electrical box can be easily removed and located up to 5 ft. (1.5 m) away, further reducing the size of the unit while making the system more accessible. The reversing valve, pressure switches and service ports are centrally located, high on the unit for access from any side.

The reversing valve, pressure switches, and service ports are centrally located for easy maintenance access from any side.

Vibration-isolating compressor mounting system reduces noise and vibration.

Key Benefits

- Up to 85% reduction in standing water in the drain pan
- Up to 15 minutes faster to install
- Square chassis for easy installation in tight spaces
- Three mounting options adapt to installation environments
- Rust-free composite drain pan
- Reconfigurable chassis allows optimal drain connections
- Compressor vibration-isolation mounts minimize noise and vibration
- Built-in refrigerant line filter drier reduces installation time and protects the compressor from moisture and contaminants
- Reversing valve, pressure switches, and service ports centrally located for easy maintenance access from any side
- Engineered to maximize the performance of R-410A, an environmentally safe refrigerant

MARINE AIR SYSTEMS®
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Specifications for Emerald Series (24K-72K) Condensers

Model [1]	E*24				E*30		E*36					E*48					E*60		
Capacity (BTU/h) [2]	24000				30000		36000					48000					60000		
Voltage (V)	230	240	230	380	230	240	230	240	230	460	380	230	240	230	460	380	230		460
Cycle (Hz) [3] /Phase (Ph)	60/1	50/1	60/3	50/3	60/1	50/1	60/1	50/1	60/3		50/3	60/1	50/1	60/3		50/3	60/1	60/3	
Full Load Amps (FLA) Cool (A)	6.3	6.4	4.5	2.7	7.3	7.9	9.1	9.4	6.3	3.3	4.44	11.9	12.08	8.23	5.95	5.29	13.56	10.18	5.25
Full Load Amps (FLA) Heat (A)	7.8	8	6.2	3.6	9.2	9.9	11.5	12	8.3	4.2	5.88	15.8	17.95	10.89	7.42	6.6	20.15	12.7	6.6
Locked Rotor Amps (LRA) (A)	43	46	55.4	28	54	67	74	67	71	38	45	105	115	95	70	60	150	120	60
Max. Circuit Breaker (A)	30		20	15	35	40	45	40	35	15	20	75	70	49	30		80	55	30
Min. Circuit Ampacity (A)	17	18	14	10	22	23	26	25	20	10	13	43	41	28	19	17	48	33	17
Refrigerant Type	410A				410A		410A					410A					410A		
Max. Height (in/mm) [4]	18/458				18/458		18/458					18.5/470					20/508		
Width (in/mm) [4]	16/407				16/407		16/407					16/407					16/407		
Depth-Without Elec. Box (in/mm) [4]	16/407				16/407		16/407					16/407					16/407		
Depth-With Elec. Box (in/mm) [4]	18.8/478				18.8/478		18.8/478					18.8/478					18.8/478		
Seawater Inlet Connection (in/mm)	⅝ /16				⅝ /16		⅝ /16					⅝ /16					⅝ /16		
Seawater Connection Type	cupranickle tube				cupranickle tube		cupranickle tube					cupranickle tube					cupranickle tube		
Refrigerant Line Connection-Discharge (in)	⅜				⅜		⅜					⅜					⅜		
Refrigerant Line Connection-Suction (in)	⅝				¾		¾					¾					¾		
Net Weight (lbs/kg) [5]	98.5/44.7	104/47.2	87/39.5	100/45.4	102.25/46.4		114.5/51.1	118/53.6	102/46.3	116/52.7		122/55.4	135/61.3				155/70.4		
Gross Weight (lbs/kg) [5]	129/58.6	133/60.4	117.55/53.4	132/59.9	133.5/60.6		147/66.7	149.5/67.9	130/58.1	148/67.2		153/69.4	150/68.1				170/77.2		
Height-Electrical Box (in/mm)	13.25/337				13.25/337		13.25/337					13.25/337					13.25/337		
Width-Electrical Box (in/mm)	7.75/197				7.75/197		7.75/197					7.75/197					7.75/197		
Depth-Electrical Box (in/mm)	3.75/96				3.75/96		3.75/96					3.75/96					3.75/96		

[1] Cruisair customers, replace '*' in the model name with 'Q' for Q-Logic digital control system, or 'M' for electro-mechanical control. Marine Air customers, replace '*' in the model name with 'D' for Passport I/O digital control system, or 'M' for electro-mechanical control.

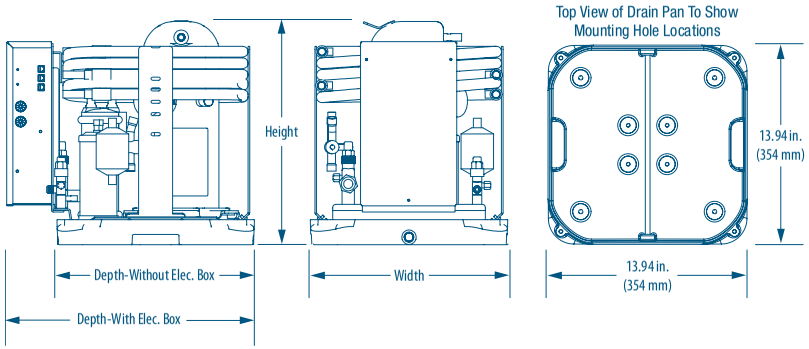
[2] BTU and electrical data are based on a 45°F/7.2°C evaporator and 100°F/37.8°C condenser in cool mode, and a 45°F/7.2°C evaporator and 130°F/54.4°C condenser in heat mode.

[3] 60Hz units must not operate at 50Hz and 50Hz units must not operate at 60Hz unless data plate says otherwise.

[4] All dimensions ± 0.30 in. (8 mm).

[5] All weights ± 10%

Dimensions



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L-2703B Rev. 20120803

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NEW

TurboVap Series Evaporators

Reduced Size, Noise & Power Draw

The TurboVap Series of direct expansion (DX) split-gas evaporators for boats is based on the revolutionary engineering advancements of the award-winning Turbo self-contained air conditioning system. Featuring a rust-free molded composite drain pan, condensate water is rapidly removed at one of two easy-to-plumb drain locations. The pan also has innovatively designed anti-slosh ridges and “positive flow” channels to ensure condensate does not spill even in the roughest seas.

For improved installation ease and flexibility, the enclosed blower motor eliminates overhang and the blower can be rotated 270° with a single adjustment screw. The unit’s unique inlet ring is designed to optimize air flow and ensure that the height of the unit does not increase when the blower rotates. The fully insulated, high-velocity blowers are quiet and efficient.

Experience better noise reduction with the TurboVap Series’ built-in cushioning system which minimizes vibration to the deck. Additionally, the innovative mounting clips utilize vibration isolators.

TurboVap units can be paired with condensers that use either R-22 or R-417A refrigerants. See the Emerald Series of TurboVaps and condensers for a complete split system that uses R-410A refrigerant.

The rust-free composite drain pan reduces standing water up to 85%, thanks to "positive-flow" drain channels. These channels also help prevent spilling and sloshing in rough seas.

Optional lineset extentions for discharge and suction are available for all TurboVap models.

Key Benefits

- Up to 28% reduced amperage
- Up to 85% reduction in standing water in the drain pan
- Up to 14% increase in cooling capacity
- Up to 15% lighter
- Up to 17% reduction in height
- Up to 19% increased air flow CFM
- Rust-free composite drain pan
- Drain pan features anti-slosh, "positive-flow" drain channels for no spills and rapid removal of condensate
- Up to 15 minutes faster to install
- Single adjustment screw for 270° of blower rotation
- High-velocity (HV) fully-insulated blowers are rotatable
- Vibration-isolation mounts reduce noise and vibration
- 115V and 230V models
- Can be used with R-22 or R-417A condensers

MARINE AIR SYSTEMS®
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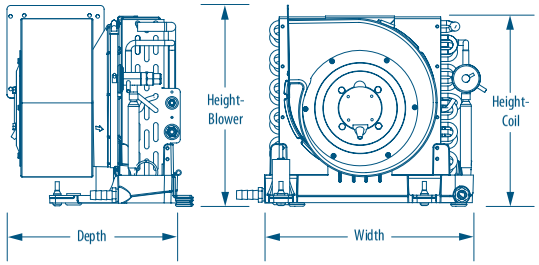
Specifications for TurboVap Series Evaporators

Model [1]	TV4		TV6		TV8		TV10		TV12		TV16	
Capacity (BTU/h)	4000		6000		8000		10000		12000		16000	
Voltage @ 50/60Hz 1-Ph (V)	115	230	115	230	115	230	115	230	115	230	115	230
Full Load Amps (FLA) Cool (A)	0.82	0.41	0.82	0.41	1.56	0.83	1.14	0.61	1.14	0.61	1.61	0.78
Max. Circuit Breaker (A)	5		5		5		5		5		5	
Min. Circuit Ampacity (A)	2	1	2	1	2		2	1	2	1	3	1
Height-Coil (in/mm) [2]	10.8/275		10.8/275		10.8/275		12.6/321		12.6/321		13/331	
Height-Blower (in/mm) [2]	10.8/275		10.8/275		11.4/290		12.6/321		12.6/321		13.6/346	
Width (in/mm) [2]	12.3/313		12.3/313		12.3/313		14.3/364		14.3/364		14.3/364	
Depth (in/mm) [2]	9.5/242		9.5/242		9.4/239		10.4/265		10.4/265		11.6/295	
Min. Supply Duct Size (in/mm)	4/102		4/102		5/127		6/153		6/153		7/178	
Min. Supply Air Grille Size (sq in/sq cm)	32/207		32/207		48/310		60/388		70/452		81/523	
Min. Return Air Grille Size (sq in/sq cm)	64/413		64/413		80/517		110/710		130/839		160/1033	
Net Weight (lbs/kg) [3]	10.5/4.8		11/4.1		13.9/6.4	14/6.4	17.5/7.1		17.5/7.1		19.8/8.1	21/9.6
Gross Weight (lbs/kg) [3]	18/8.2		19/8.7		20.75/9.5	22/9.1	25.5/11.6	25/11.4	25.5/11.6		26.75/12.2	28.25/12.9

[1] Add '115V' or '230V' to the model number for 115V and 230V units, respectively.
[2] All dimensions ± 0.30 in. (8 mm).
[3] All weights ± 10%

Dimensions



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Environmentally Responsible

Assembled in the USA

Dealer

NEW

Emerald TurboVap Series Evaporators

Reduced Size, Noise & Power Draw

The Emerald TurboVap series of split-gas evaporators for boats incorporates revolutionary design features with mechanical engineering that maximizes the effectiveness of R-410A, an environmentally safe refrigerant.

Emerald TurboVaps are easy to install. For ideal positioning, the high-velocity blower can rotate up to 270 degrees with a single adjustment screw. The enclosed motor means no blower-motor overhang for a compact design.

Since evaporators are usually positioned in or near cabins, noise is always a concern. The Emerald TurboVap uses a vibration-isolation mounting system to minimize noise, so the evaporator runs more quietly. The fully insulated, high-velocity blowers are quiet and efficient.

Excellent condensate drainage is achieved with a unique positive-flow, anti-slosh, composite drain pan that is rust-free. Condensate water is rapidly removed at one of two easy-to-plumb drain locations.

The Emerald TurboVap Series was designed to operate as a system with the Emerald Condenser Series. Both of these split-system components were engineered to harness and maximize the superior thermodynamic properties of the environmentally safe R-410A refrigerant.

The Emerald TurboVap is available in six capacities ranging from 4,000 to 16,000 BTU/hr.

The rust-free composite drain pan reduces standing water up to 85%, thanks to "positive-flow" drain channels. These channels also help prevent spilling and sloshing in rough seas.

Optional lineset extentions for discharge and suction are available for all TurboVap models.

Key Benefits

- Up to 28% reduced amperage
- Up to 85% reduction in standing water in the drain pan
- Up to 14% increase in cooling capacity
- Up to 15% lighter
- Up to 17% reduction in height
- Up to 19% increased air flow CFM
- Rust-free composite drain pan
- Drain pan features anti-slosh, "positive-flow" drain channels for no spills and rapid removal of condensate
- Up to 15 minutes faster to install
- Single adjustment screw for 270° of blower rotation
- High-velocity (HV) fully-insulated blowers are rotatable
- Vibration-isolation mounts reduce noise and vibration
- 115V and 230V models
- Designed to be used with Emerald Series (R-410A) condensers

MARINE AIR SYSTEMS®
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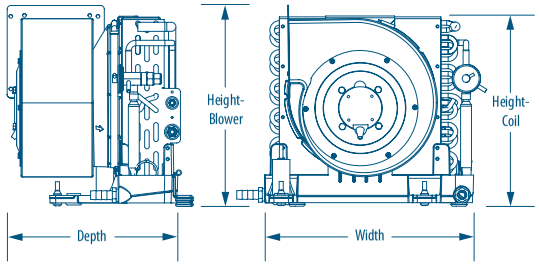
by Dometic GROUP

Specifications for Emerald TurboVap Series Evaporators

Model [1]	TVE4		TVE6		TVE8		TVE10		TVE12		TVE16	
Capacity (BTU/h)	4000		6000		8000		10000		12000		16000	
Voltage @ 50/60Hz 1-Ph (V)	115	230	115	230	115	230	115	230	115	230	115	230
Full Load Amps (FLA) Cool (A)	0.82	0.41	0.82	0.41	1.56	0.83	1.14	0.61	1.14	0.61	1.61	0.78
Max. Circuit Breaker (A)	5		5		5		5		5		5	
Min. Circuit Ampacity (A)	2	1	2	1	2		2	1	2	1	3	1
Height-Coil (in/mm) [2]	10.8/275		10.8/275		10.8/275		12.6/321		12.6/321		13/331	
Height-Blower (in/mm) [2]	10.8/275		10.8/275		11.4/290		12.6/321		12.6/321		13.6/346	
Width (in/mm) [2]	12.3/313		12.3/313		12.3/313		14.3/364		14.3/364		14.3/364	
Depth (in/mm) [2]	9.5/242		9.5/242		9.4/239		10.4/265		10.4/265		11.6/295	
Min. Supply Duct Size (in/mm)	4/102		4/102		5/127		6/153		6/153		7/178	
Min. Supply Air Grille Size (sq in/sq cm)	32/207		32/207		48/310		60/388		70/452		81/523	
Min. Return Air Grille Size (sq in/sq cm)	64/413		64/413		80/517		110/710		130/839		160/1033	
Net Weight (lbs/kg) [3]	10.5/4.8	11.25/5.2	12/5.5	12.25/5.6	14/6.4		17.5/7.1		17.5/7.1	17.75/8.1	20.5/9.3	21/9.6
Gross Weight (lbs/kg) [3]	18.5/8.4	18/8.2	19/8.7	20.25/9.2	22/9.1		25.5/11.6	25/11.4	25.5/11.6	24.75/11.3	28.5/12.1	

[1] Add '115V' or '230V' to the model number for 115V and 230V units, respectively.
[2] All dimensions ± 0.30 in. (8 mm).
[3] All weights ± 10%

Dimensions



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L-2696B Rev. 20120803

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Environmentally Responsible

Assembled in the USA

Dealer

CS Series (6K-16K) Condensers

High-Efficiency Cooling & Heating

The CS series of condensing units for boats provides heating and cooling in a highly efficient package. The hermetically sealed, high-efficiency compressor reduces amp draw while pressure switches, thermal-overload, and start components provide constant system protection and proper operation. In addition, the expansion device and check-valve assemblies control load balancing during operation. The copper-encased cupronickel condenser coils are highly resistant to corrosion caused by continuous seawater flow.

The symmetrical base design provides optimum space efficiency and installation flexibility for easy handling and positioning of the unit. A built-in hose barb aids in complete condensate removal from the drain pan. Two sets of vibration isolators ensure quiet operation.

The electrical box can be mounted remotely. It has a moisture-resistant design with a corrosion-resistant enclosure. CS Digital (CSD) units include the Passport I/O circuit board.

As with all Marine Air products, quality is assured. Each unit is pre-charged, test-run in all operating modes, and leak-checked at the factory prior to shipping. All surface components are constructed of or coated with materials resistant to fire and corrosion. Charge Guard® protection provides sealed access ports that ensure environmental protection and system integrity. All CS condensing units meet or exceed applicable ABYC and US Coast Guard regulations, CE directives, and general Air Conditioning and Refrigeration Industry (ARI) standards.

Key Benefits

- High-efficiency condensers
- Valves and switches provide load balancing and constant system protection
- Symetrical base for installation flexibility and ease of handling
- Electrical box can be mounted remotely
- Passport I/O circuit board included
- Charged, tested, and leak checked at the factory
- Meets or exceeds all applicable standards and regulation

MARINE AIR SYSTEMS®
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Specifications for CS Series (6K-16K) Condensers

Model [1]	CSD6			CSD9			CSD12			CSD16		
Capacity (BTU/h) [2]	6000			9000			12000			16000		
Voltage (V)	115	230	240	115	230	240	115	230	240	115	230	240
Cycle (Hz) [3] /Phase (Ph)	60/1		50/1	60/1		50/1	60/1		50/1	60/1		50/1
Full Load Amps (FLA) Cool (A)	7	3.7	4.1	6.4	3.2	4.6	9.2	4.4	5.4	12.2	5.7	7
Full Load Amps (FLA) Heat (A)	7.7	4	4.8	7.2	3.6	5.2	11.1	5	6	13.5	6.4	8
Locked Rotor Amps (LRA) (A) [4]	34	20	21.2	40	20	25.6	50	31		75	36	39
Max. Circuit Breaker (A) [5]	20	10		20	10	15	35	15		40	20	25
Min. Circuit Ampacity (A)	13	8	7	13	7	10	21	10	11	25	12	15
Refrigerant Type	417A			417A			417A			417A		
Max. Height (in/mm) [6]	15.2/387			15.2/387			15.2/387			15.2/387		
Width (in/mm) [7]	13.13/334			13.13/334			13.13/334			13.13/334		
Depth (in/mm) [7]	13.13/334			13.13/334			13.13/334			13.13/334		
Seawater Inlet Connection (in/mm)	⅝ /16			⅝ /16			⅝ /16			⅝ /16		
Refrigerant Line Connection-Discharge (in)	¼			¼			¼			¼		
Refrigerant Line Connection-Suction (in)	⅜			⅜			⅜			½		
Net Weight (lbs/kg) [8]	56/25.5			63/28.6	62.5/28.4	64/29.1	64.5/29.3		66/29.1	66.25/30.1	66/29.1	
Gross Weight (lbs/kg) [8]	63/28.6			85.5/38.8	85/38.6	74/33.6	87/39.5		75/34.1	90/40.9	87/39.5	75/34.1

[1] 'D' in the model number indicates a digital control. Replace with 'M' for units with mechanical control. Add a 'Z' for 230V/60Hz units or 'Z50' for 240V/50Hz units. For example: CSD12K=115V/60Hz; CSD12KZ=230V/60Hz; CSD12KZ50=240V/50Hz

[2] BTU and electrical data are based on a 45°F/7.2°C evaporator and 100°F/37.8°C condenser in cool mode, and a 45°F/7.2°C evaporator and 130°F/54.4°C condenser in heat mode.

[3] Some 60Hz units may be operated at 50Hz but at reduced voltages that will result in a loss of capacity and higher or lower amp draw than listed. Dedicated 50Hz units are available that provide the full rated capacity, but these units must not be operated.

[4] Varies with voltage and load, and may be higher or lower than listed.

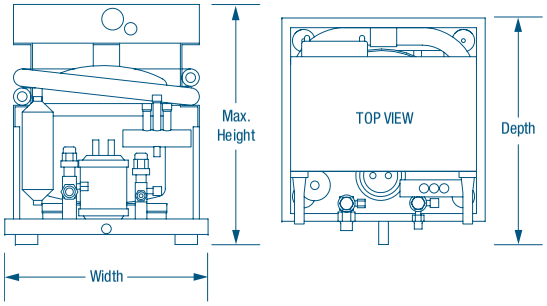
[5] Specification is for reverse-cycle units. Cool-only units may use smaller circuit breakers.

[6] Combined height of unit and electrical box. Subtract 2.60 in. (66 mm) for remotely-mounted electrical box. All dimensions ± 0.25 in. (6 mm).

[7] All dimensions ± 0.25 in. (6 mm).

[8] Based on 60Hz/1-phase units. All weights ± 10%

Dimensions



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Environmentally Responsible

Assembled in the USA

Dealer

CS Series (24K-60K) Condensers

High-Efficiency Cooling & Heating

Key Benefits

- High-efficiency condensers
- Valves and switches provide load balancing and constant system protection
- Symetrical base for installation flexibility and ease of handling
- Electrical box can be mounted remotely
- Passport I/O circuit board included
- Charged, tested, and leak checked at the factory
- Meets or exceeds all applicable standards and regulation

The CS series of condensing units for boats provides heating and cooling in a highly efficient package. The hermetically sealed, high-efficiency compressor reduces amp draw while pressure switches, thermal-overload, and start components provide constant system protection and proper operation. In addition, the expansion device and check-valve assemblies control load balancing during operation. The copper-encased cupronickel condenser coils are highly resistant to corrosion caused by continuous seawater flow.

The symmetrical base design provides optimum space efficiency and installation flexibility for easy handling and positioning of the unit. A built-in hose barb aids in complete condensate removal from the drain pan. Two sets of vibration isolators ensure quiet operation.

The electrical box can be mounted remotely. It has a moisture-resistant design with a corrosion-resistant enclosure. CS Digital (CSD) units include the Passport I/O circuit board.

As with all Marine Air products, quality is assured. Each unit is pre-charged, test-run in all operating modes, and leak-checked at the factory prior to shipping. All surface components are constructed of or coated with materials resistant to fire and corrosion. Charge Guard® protection provides sealed access ports that ensure environmental protection and system integrity. All CS condensing units meet or exceed applicable ABYC and US Coast Guard regulations, CE directives, and general Air Conditioning and Refrigeration Industry (ARI) standards.

MARINE AIR SYSTEMS®
AIR
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Specifications for CS Series (24K-60K) Condensers

Model [1]	CSD24			CSD30			CSD36				CSD48				CSD60
Capacity (BTU/h) [2]	24000			30000			36000				48000				60000
Voltage (V)	230	240	380	230		240	230		240	380	230		240	380	230
Cycle (Hz) [3] /Phase (Ph)	60/1	50/1	50/3	60/1	60/3	50/1	60/1	60/3	50/1	50/3	60/1	60/3	50/1	50/3	60/1
Full Load Amps (FLA) Cool (A)	7	6.9	2.6	7.7	6.5	8.5	9.2	7.1	11.7	4.3	11.4	8.2	22.3	5	17.2
Full Load Amps (FLA) Heat (A)	8.6	8.5	3.5	9.6		10.6	11.7	7.9	13.9	5.4	14.5	9.7	24.8	6.5	22
Locked Rotor Amps (LRA) (A) [4]	60	55	29	61	58	70	73	68	85	40	86	78	132.2	60	132.2
Max. Circuit Breaker (A) [5]	35	30	10	40	30	35	45	30	50	15	55	35	80	20	80
Min. Circuit Ampacity (A)	22	19	9	24	17	22	28	17	29	11	33	20	46	14	46
Refrigerant Type	417A			417A			417A				417A				417A
Max. Height (in/mm) [6]	21/534			21.5/547			25.5/648				25.5/648				28/712
Width (in/mm) [7]	16/407			16/407			16/407				16/407				24/610
Depth (in/mm) [7]	16/407			16/407			16/407				16/407				24/610
Seawater Inlet Connection (in/mm)	⅝ /16			⅝ /16			⅝ /16				⅝ /16				⅝ /16
Refrigerant Line Connection-Discharge (in)	⅜			⅜			⅜				⅜				⅝
Refrigerant Line Connection-Suction (in)	⅝			¾			¾				¾				¾
Net Weight (lbs/kg) [8]	115/52.2	123.3/55.1	115/52.2	127/57.7			TBD	135/61.3			145/65.8				173/78.5
Gross Weight (lbs/kg) [8]	120/54.5	TBD	120/54.5	132/59.9			198/89.9	140/63.6			150/68.1				181/82.2

[1] 'D' in the model number indicates a digital control. Replace with 'M' for units with mechanical control. Add a 'Z' for 230V/60Hz units or 'Z50' for 240V/50Hz units. For example: CSD12K=115V/60Hz; CSD12KZ=230V/60Hz; CSD12KZ50=240V/50Hz

[2] BTU and electrical data are based on a 45°F/7.2°C evaporator and 100°F/37.8°C condenser in cool mode, and a 45°F/7.2°C evaporator and 130°F/54.4°C condenser in heat mode.

[3] Some 60Hz units may be operated at 50Hz but at reduced voltages that will result in a loss of capacity and higher or lower amp draw than listed. Dedicated 50Hz units are available that provide the full rated capacity, but these units must not be operated.

[4] Varies with voltage and load, and may be higher or lower than listed.

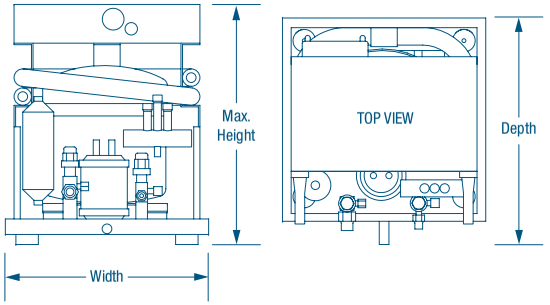
[5] Specification is for reverse-cycle units. Cool-only units may use smaller circuit breakers.

[6] Combined height of unit and electrical box. Subtract 3.60 in. (92 mm) for remotely-mounted electrical box.

[7] All dimensions ± 0.25 in. (6 mm).

[8] Based on 60Hz/1-phase units. All weights ± 10%

Dimensions



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L-2126 Rev. 20130208

Specifications and availability subject to change without notice.

Environmentally Responsible

Assembled in the USA

Dealer

R-410A Green Gas

EBE Series R-410A Evaporators

The New Standard In Marine High-Performance Evaporators

Compact EBE split evaporators for boats are draw-through, ductable cooling units with reverse-cycle heating. Featuring a rotatable, high-efficiency permanent split capacitor (PSC) blower in which the motor is concealed, EBE series evaporators are available in capacities from 6K to 36K BTU/hr. EHBE units have electric heat.

The EBE Series was designed for installation low in a closet, cabinet, or other enclosed space, with discharge air ducted to one or more grilles high in the cabin. EBE units can be used with a combination of plenums and flexible duct, or built-in ductwork may be used. If you are using built-in ductwork, a flexible transition between the blower and duct should be installed.

Vibration-isolation mounting is built into each EBE unit to reduce noise and vibration. The PSC blower is supported by a sturdy aluminum bracket with isolation grommets to reduce possible vibration. The blower's internal motor housing reduces the overall unit depth for easier installation and promotes quieter operation.

The drain pan and blower housing are covered with insulating foam which reduces noise and secondary condensation.

The "positive flow" drain pan has an anti-slosh, antifungal foam lining. Two 1/2 in. (13 mm) drains are located on the blower side of the drain pan.

Key Benefits

- Compact ductable cooling or heating units
- High-velocity (HV) fully-insulated blowers are rotatable
- Insulated condensate pan with anti-slosh, anti-fungal foam lining
- Available with electric heat (EHBE models)
- High-efficiency evaporator coil
- Larger blower inlet for increased air flow across the coil
- Blower support bracket with cushioned mounts to reduce noise and vibration
- Increased metal thickness on structural parts for added strength
- Thermal expansion valve for optimal performance over a range of conditions
- Designed to be used with Emerald Series (R-410A) condensers

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Specifications for EBE Series R-410A Evaporators

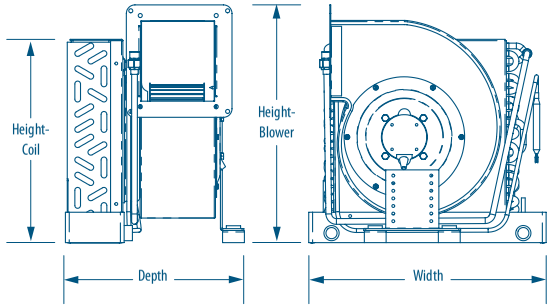
Model [1]	EBE18	EBE24	EBE30	EBE36	EHBE8	EHBE10	EHBE12	EHBE16	EHBE24
Capacity (BTU/h) [2]	18000	24000	30000	36000	8000	10000	12000	16000	24000
Voltage @ 50/60Hz 1-Ph (V)	230	230	230	230	230	230	230	230	230
Full Load Amps (FLA) Cool (A)	1.15	1.64	1.64	4	0.98	0.66	0.56	0.88	1.64
Full Load Amps (FLA) Heat (A)	N/A	N/A	N/A	N/A	5.4	7.2	9.26	9.58	14.68
Full Load Amps (FLA) Blower (A)	1.15	1.64	4	4	0.98	0.66	0.56	1.15	1.64
Max. Circuit Breaker (A)	5	5	5	5	10	10	10	10	20
Min. Circuit Ampacity (A)	2	3	3	5	6	8	10	10	16
Electric heat (kW/hp)	N/A	N/A	N/A	N/A	1/1.4	1.5/2.1	2/2.7	2/2.7	3/4.1
Heater Amps (A)	N/A	N/A	N/A	N/A	4.35	6.52	8.7	8.7	13.04
Air Flow (cfm/m3h)	540/918	800/1360	1000/1700	1200/2039	266/452	333/566	400/680	533/906	800/1360
Height-Coil (in/mm) [2]	13.63/347	16.5/420	20.5/521	20.5/521	11.25/286	12.5/318	12.5/318	13.5/343	16.5/420
Height-Blower (in/mm) [2]	15.13/385	17/432	22/559	22.25/566	12.5/318	13.5/343	13.5/343	15.5/394	17/432
Width (in/mm) [2]	16/407	20/508	20.75/528	20.75/528	13.75/350	14.25/362	14.25/362	16/407	20/508
Depth (in/mm) [2]	14/356	14.5/369	15/381	17.75/451	12/305	13.75/350	14.5/369	14.75/375	15/381
Net Weight (lbs/kg) [3]	27/12.3	37.65/17.1	36/16.4	41.75/18.1	21/9.6	23/10.5	23/10.5	28/12.8	44.75/20.3
Gross Weight (lbs/kg) [3]	35/15.9	49.5/22.5	42/19.1	56.5/25.7	29/13.2	31/14.1	31.5/14.3	36/16.4	56.25/25.6

[1] 'EBE' indicates evaporator without electric heat; 'EBHE' indicates evaporator with electric heat. Dometic Marine also offers an EBHE6-1KW and EBHE16-3KW. For more information please contact a sales representative at 954-973-2477.

[2] All dimensions ± 0.30 in. (8 mm).

[3] All weights ± 10%

Dimensions



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L-2855 Rev. 20120803

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Environmentally Responsible

Assembled in the USA

Dealer

EFD 2-Ton Evaporator

High-Capacity Marine Unit for R-22 or R-417A Condensers

Marine Air's EFD 24,000 BTU/hr evaporator for split-system air conditioning features a compact, modular design. For maximum efficiency, the plenum chambers are increased and the coil has enhanced fins and rifled tubing. This unit also offers easy disassembly for access to components for maintenance. It works with Marine Air R-22 or R-417A condensers.

The centrifugal blower is quiet and efficient with a fully-insulated housing. For installation flexibility, the blower rotates to horizontal or vertical positions. The blower's internal motor reduces depth for easier installation. A thermoplastic mounting ring enables easy installation of ducting or transition box.

The condensate drain pan includes two ½ in. (13 mm) FPT drain hook-ups, and it is insulated to prevent sweating.

As with all Marine Air products, quality is assured. Each unit is pre-charged, test-run in all operating modes, and leak-checked at the factory prior to shipping. All surface components are constructed of or coated with materials resistant to fire and corrosion. Charge Guard® protection provides sealed access ports that ensure environmental protection and system integrity. Marine Air evaporators meet or exceed applicable ABYC and US Coast Guard regulations, CE directives, and general Air Conditioning and Refrigeration Industry (ARI) standards.

Key Benefits

- Compact high-efficiency 24,000 BTU/hr evaporator
- Easy disassembly for maintenance access
- High-velocity (HV) blower with internal motor to reduce depth
- Patented
- 1/2 in. (13 mm) FPT drain connections
- Blower support bracket with cushioned mounts to reduce noise and vibration
- Charged, tested, and leak checked at the factory
- Meets or exceeds all applicable standards and regulation

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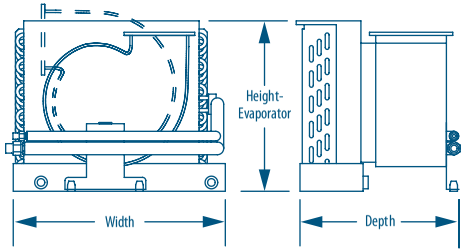
Specifications for EFD 2-Ton Evaporator

Model [1]	EFD24
Capacity (BTU/h)	24000
Voltage @ 50/60Hz 1-Ph (V)	230
Full Load Amps (FLA) Cool (A)	1.64
Full Load Amps (FLA) Blower (A)	1.64
Max. Circuit Breaker (A)	5
Min. Circuit Ampacity (A)	3
Height-Evaporator (in/mm) [2]	16.5/420
Width (in/mm) [2]	21.25/540
Depth (in/mm) [2]	15.6/397
Min. Supply Duct Size (in/mm)	8/204
Min. Supply Air Grille Size (sq in/sq cm)	140/904
Min. Return Air Grille Size (sq in/sq cm)	240/1549
Refrigerant Line Connection-Discharge (in)	⅜
Refrigerant Line Connection-Suction (in)	⅝
Net Weight (lbs/kg) [3]	37.95/17.3
Gross Weight (lbs/kg) [3]	42.2/19.2

[1] Cruisair customers, replace '*' in the model name with 'Q' for Q-Logic digital control system, or 'M' for electro-mechanical control. Marine Air customers, replace '*' in the model name with 'D' for Passport I/O digital control system, or 'M' for electro-mechanical control.
[2] All dimensions ± 0.30 in. (8 mm).
[3] All weights ± 10%

Dimensions



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L-2128 Rev. 20120803

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Environmentally Responsible

Dealer

CHC Chiller Compact Series

Compact Modules In An Enclosed Design

Marine Air's Chiller Compact series is ideal for larger boats in the 45-70 ft. (15-20 m) range. Available in capacities ranging from 16,000 to 24,000 BTU/hr, the Chiller Compact uses circulated water in a closed loop in place of copper refrigerant tubes. The innovative, space-saving compact base of the Chiller Compact was designed to allow individual modules to be multiplexed to provide precise capacity requirements for any application.

Featuring high-efficiency components that offer maximum performance, the Chiller Compact uses rotary or scroll compressors which are quieter and consume less power. A custom-fabricated condenser coil is constructed of spiral-fluted cupronickel to provide maximum heat transfer and high corrosion resistance.

The environmentally friendly, hermetically-sealed Chiller Compact units use closed-refrigerant circuits, pre-charged with refrigerant. No additional refrigerant is required during the installation or at initial start-up and operation of the system.

Key Benefits

- Compact footprint for installation flexibility
- Single modules can produce up to 26,400 BTU/hr
- Up to six modules can be multiplexed for larger capacities
- Thermodynamically-matched components assure maximum performance
- High-efficiency rotary or scroll compressors
- Fewer moving parts ensure better reliability
- Spiral-fluted cupronickel condenser coil provides maximum heat transfer and corrosion resistance
- Digital Diagnostic Controller (DDC) monitors and protects the system
- Charged, tested, and leak checked at the factory
- Meets or exceeds all applicable standards and regulation
- Charge Guard protection provides sealed access ports, ensuring environmental protection and chiller module integrity

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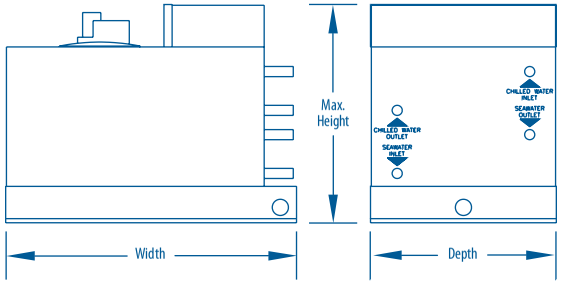
Specifications for CHC Chiller Compact Series

Model [1]	CHC16		CHC20	CHC24			
Capacity (BTU/h)	16000		20000	24000			
Voltage (V)	115	220	220	230	220	230	380
Cycle (Hz)/Phase (Ph)	60/1	50/1	50/1	60/1	50/1	60/3	50/3
Full Load Amps (FLA) Cool (A)	7.8	4.3	6.3	5.7	7.4	5.22	3.3
Full Load Amps (FLA) Heat (A)	10.8	6.2	9.3	8.6	10.8	7.1	4.1
Locked Rotor Amps (LRA) (A)	59	32	61	56	71	55	34
Max. Circuit Breaker (A)	35	20	35	35	40	25	15
Min. Circuit Ampacity (A)	22	13	22	21	25	16	10
Refrigerant Type	407C		407C	407C			
Max. Height (in/mm) [2]	12.75/324		15.75/401	15.75/401	17.13/436	15.75/401	
Max. Width (in/mm) [3][2]	11.5/293		13/331	13/331			
Max. Depth (in/mm) [2]	18/458		18/458	18/458			
Seawater Inlet Connection (in/mm)	⅝ /16		⅝ /16	⅝ /16			
Net Weight (lbs/kg) [4]	54.5/24.8	58/26.4	84/38.2	92.5/41.1	96.5/43.8	84/38.2	101/45.9
Gross Weight (lbs/kg) [4]	77.25/35.1	80/36.3	94/42.7	115.75/52.6	118.75/53.9	94/42.7	110/49.9

[1] Add a 'Z' 230V/60Hz units or 'Z50' for 220V/50Hz units.
[2] All dimensions ± 0.25 in. (6 mm).
[3] Add 1.0 in. (26 mm) to width or depth for mounting brackets, depending on their rotation.
[4] All weights ± 10%

Dimensions



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L-2135 Rev. 20130702

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Environmentally Responsible

Assembled in the USA

Dealer

MCG Low-Profile Series Modular Chillers

Space-Saving Chiller Design

Marine Air MCG Low-Profile Chillers are designed for locations onboard where height is an obstacle. At a height of only 18.25 in. (464 mm) for 3- to 6-ton models and 25.2 in. (640 mm) for 12.5- and 15-ton models, MCGLP units are much shorter than other chillers in the same capacity range, but no shorter on performance and reliability.

MCGLP chillers provide reverse-cycle cooling and heating and are available in capacities from 36,000 to 180,000 BTU/hr (3 to 15 tons). Individual modules can be staged for larger capacities. The MCGLP series uses R-410A environmentally safe refrigerant, which has exceptional thermodynamic properties and maximizes system efficiency.

Performance and reliability are further improved with up to 25 percent more condenser area than similar low-profile units, and an expansion valve that modulates the refrigerant.

The MCGLP series has stainless-steel drain pans for 3- to 6-ton modules, and lightweight painted aluminum drain pans for 12.5- to 15-ton modules. All models have removable PVC water headers that resist corrosion and erosion.

MCGLP chillers are monitored and protected by Marine Air's exclusive Digital Diagnostic Controller (DDC), which can be installed remotely. For staged systems, the Chilled Water Master Controller (CWMC) provides central control over each DDC on each module in the system. Up to six modules are supported. The CWMC coordinates all cooling and heating functions, evenly distributes compressor run times, and operates the seawater and circulated water pumps.

MCG low-profile modules are available in capacities up to 15-tons and can be staged for higher capacities.

Key Benefits

- Fits into height-restrictive spaces
- Reverse-cycle heating
- Stainless-steel drain pan on 36,000 - 72,000 BTU/hr models
- Lightweight painted aluminum drain pan on 150,000 - 180,000 BTU/hr models
- Up to six modules can be multiplexed for larger capacities
- Up to 25% more condenser area than similar units
- Spiral-fluted cupronickel condenser coil provides maximum heat transfer and corrosion resistance
- Engineered to maximize the performance of R-410A, an environmentally safe refrigerant
- Electrical box can be remotely mounted up to 6 ft. (1.8 m)
- Removable PVC water headers resist corrosion and erosion
- Expansion valve modulates refrigerant for improved performance
- Hot-gas bypass to provide heating in cold seawater conditions (36,000 - 72,000 BTU/hr models)
- Charged, tested, and leak checked at the factory
- Meets or exceeds all applicable standards and regulation
- Charge Guard protection provides sealed access ports, ensuring environmental protection and chiller module integrity

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Specifications for MCG Low-Profile Series Modular Chillers

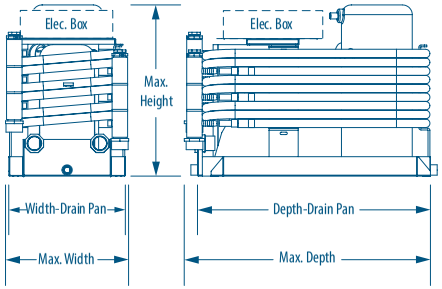
Model [1]	MCGVLP36				MCGVLP48					MCGVLP60					MCGVLP72				MCGVLP150			MCGVLP180		
Capacity (BTU/h)	36000				48000					60000					72000				150000			180000		
Voltage (V)	230	220	230	460	230	220	230	380	460	230	220	230	380	460	230		380	460	230	380	460	230	380	460
Cycle (Hz)/Phase (Ph)	60/1	50/1	60/3		60/1	50/1	60/3	50/3	60/3	60/1	50/1	60/3	50/3	60/3	60/1	60/3	50/3	60/3	60/3	50/3	60/3	60/3	50/3	60/3
Full Load Amps (FLA) Cool (A)	12.9	12.3	8.3	3.9	13.8	14.7	11.3	5.8	5.2	17.8	22.2	11.3	8.3	5.9	20.1	14.2	10.1	7.1	30.6	19.9	15.1	38.3	24.1	20.2
Full Load Amps (FLA) Heat (A) [2]	16.8	18	10.9	5	20.2	21.4	12.7	7.6	6.6	23	29.1	14.8	10.8	7.4	29.3	17.9	13.3	8.9	38.9	24.5	19.3	50	29.9	25
Locked Rotor Amps (LRA) (A)	105	102.5	95	45	150	130	120	70	60	145	130	123	87	70	145	160	100	87	304	197	147	351	239	197
Max. Circuit Breaker (A)	70	75	50	23	80	90	58	33	30	100	101	60	42	33	94	81	42		144	86	67	168	114	86
Min. Circuit Ampacity (A)	43	41	27	12	48	50	33	19	17	57		34	24	19	53	45	24		80	49	38	94	64	49
Refrigerant Type	R410A				R410A					R410A					R410A				R410A			R410A		
Max. Height (in/mm) [2]	18.25/464				18.25/464					18.25/464					18.25/464				25.2/641			25.2/641		
Width-Drain Pan (in/mm) [2]	12/305				12/305					12/305					12/305				20.13/512			20.13/512		
Max. Width (in/mm) [2]	12.69/323				12.69/323					12.69/323					12.69/323				21.5/547			21.5/547		
Depth-Drain Pan (in/mm) [2]	24/610				24/610					24/610					24/610				36.75/934			36.75/934		
Max. Depth (in/mm) [2]	25.38/645				25.38/645					25.38/645					25.38/645				40.03/1017			40.03/1017		
Seawater Inlet Connection (in/mm)	1/26				1/26					1/26					1/26				2/51			2/51		
Chilled Water Connection Size (in)	1				1					1¼					1¼				2			2		
Height-Electrical Box (in/mm)	11/280				11/280					11/280					11/280				13.3/338			13.3/338		
Width-Electrical Box (in/mm)	9.8/249				9.8/249					9.8/249					9.8/249				12/305			12/305		
Depth-Electrical Box (in/mm)	3.7/94				3.7/94					3.7/94					3.7/94				4.3/110			4.3/110		

[1] For information about net weight and shipping weight please contact a Dometic Marine sales representative at 954-973-2477.

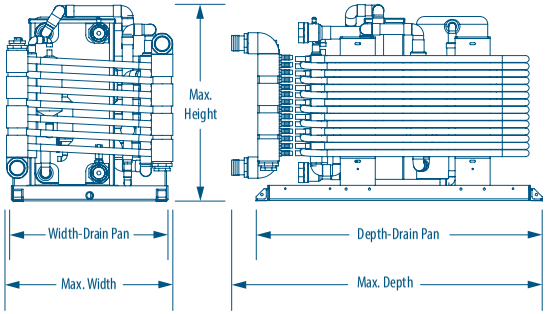
[2] All dimensions ± 0.30 in. (8 mm).

Dimensions

MCGLP 3- TO 6-TON MODULES



MCGLP 12.5- TO 15-TON MODULES



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L-2735 Rev. 20130419

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Environmentally Responsible

Assembled in the USA

Dealer

Now With R-410A

MCG Series 24K-72K Modular Chillers

The Standard In Chilled Water Marine Air Conditioning

Marine Air's MCG chilled water series is available in capacities ranging from 24,000 (2 ton) to 180,000 (15 ton) BTU/hr. Featuring a compact base design, MCG modules can be staged to provide a larger system, which is easily retrofitted and serviced in the field. Up to six 15-ton stages can be configured for a system total of 1,080,000 BTU/hr, or 90 tons.

Each refrigerant circuit is hermetically sealed and factory pre-charged with R-410A refrigerant. This environmentally safe refrigerant has exceptional thermodynamic properties and maximizes system efficiency.

Each condensing unit is monitored and protected with freeze controls, high-limit switches, high and low aquastats, and timers. These condensing units can be installed in any convenient location and are unaffected by vibration, moisture or ambient temperatures up to 140°F/60°C.

MCG chillers are monitored and protected by Marine Air's exclusive Digital Diagnostic Controller (DDC), which can be installed remotely. For staged systems, the Chilled Water Master Controller (CWMC) provides central control over each DDC on each module in the system. Up to six modules are supported. The CWMC coordinates all cooling and heating functions, evenly distributes compressor run times, and operates the seawater and circulated water pumps.

MCGs are available in single phase or three phase, 50Hz or 60Hz, and all standard voltages (208, 230, 380, 460 VAC).

Key Benefits

- Compact footprint for installation flexibility
- Aluminum construction is corrosion resistant and lightweight
- Up to six modules can be multiplexed for larger capacities
- Electrical box can be remotely mounted up to 6 ft. (1.8 m)
- Bi-flow expansion valves balance the system between heat and cool modes
- Compact stainless-steel brazed plate heat exchangers for maximum efficiency
- Spiral-fluted cupronickel condenser coil provides maximum heat transfer and corrosion resistance
- Digital Diagnostic Controller (DDC) monitors and protects the system
- Engineered to maximize the performance of R-410A, an environmentally safe refrigerant
- Charged, tested, and leak checked at the factory
- Meets or exceeds all applicable standards and regulation
- Charge Guard protection provides sealed access ports, ensuring environmental protection and chiller module integrity

MARINE AIR SYSTEMS®
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by Dometic GROUP

Specifications for MCG Series 24K-72K Modular Chillers

Model [1]	MCGV24					MCGV36					MCGV48					MCGV60					MCGV72			
Capacity (BTU/h)	24000					36000					48000					60000					72000			
Voltage (V)	230	220	230	380	460	230	240	230	380	460	240	230		380	460	230	240	230	380	460	230		380	460
Cycle (Hz)/Phase (Ph)	60/1	50/1	60/3	50/3	60/3	60/1	50/1	60/3	50/3	60/3	50/1	60/1	60/3	50/3	60/3	60/1	50/1	60/3	50/3	60/3	60/1	60/3	50/3	60/3
Full Load Amps (FLA) Cool (A)	6.4	9.6	5.5	3.5	2.7	12	12.3	8.3	5.1	3.9	14.7	13.8	11.3	5.8	5.2	17.8	22.2	11.3	8.3	5.9	20.1	14.2	10.1	7.1
Full Load Amps (FLA) Heat (A)	9.5	11.9	7.3	4.6	3.6	15.7	18	10.9	6.6	5	21.4	20.2	14	7.6	6.6	23	29.1	14.8	10.8	7.4	29.3	17.9	13.3	8.9
Locked Rotor Amps (LRA) (A)	58.3	97	58	45	28	105	102.5	95	50	45	130	150	120	70	60	145	130	123	87	70	145	160	100	87
Max. Circuit Breaker (A)	45		29	20	18	70	75	50	27	23	90	80	50	33	30	100		60	40	33	94	80	42	
Min. Circuit Ampacity (A)	25	28	17	13	10	43	41	27	15	12	50	48	33	19	17	57		34	24	19	53	45	24	
Refrigerant Type	R410A					R410A					R410A					R410A					R410A			
Height-Without Elec. Box (in/mm) [2]	17.22/438					23.57/599					23.57/599					23.44/596					23.44/596			
Height-With Elec. Box (in/mm) [2]	21.74/553					23.57/599					23.57/599					26.08/663					26.08/663			
Width-Drain Pan (in/mm)	12/305					12/305					12/305					12/305					12/305			
Max. Width (in/mm) [2][2]	12/305					12.5/318					12.5/318					13.25/337					13.25/337			
Depth-Drain Pan (in/mm) [2][2]	24/610					24/610					24/610					24/610					24/610			
Max. Depth (in/mm) [2]	24.97/635					30.78/782					30.78/782					30.7/780	30.07/764				30.04/764			
Seawater Inlet Connection (in/mm)	1/26					1/26					1/26					1/26					1/26			
Chilled Water Connection Size (in)	1					1					1					1					1			
Height-Electrical Box (in/mm) [3]	11/280					11/280					11/280					11/280					11/280			
Width-Electrical Box (in/mm)	9.8/249					9.8/249					9.8/249					9.8/249					9.8/249			
Depth-Electrical Box (in/mm)	3.7/94					3.7/94					3.7/94					3.7/94					3.7/94			

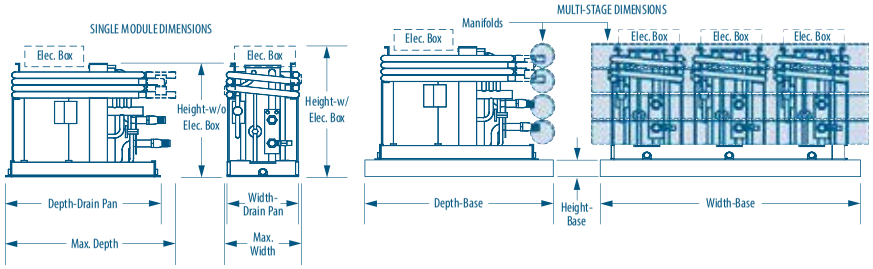
[1] For information about net weight and shipping weight please contact a Dometic Marine sales representative at 954-973-2477.
[2] All dimensions ± 0.30 in. (8 mm).
[3] The electrical box (DDC) for single chiller modules can be mounted remotely.

Dimensions for Multi-Stage Systems

No. of Stages	Height-Base (in/mm)	Width-Base (in/mm)	Depth-Base (in/mm)	Height-CWMC [1] (in/mm)	Width-CWMC [1] (in/mm)	Depth-CWMC [1] (in/mm)
MCG24 to MCG72 Modules						
2	1.50/38	41.5/1054	31.0/787	24.0/610	22.0/559	7.75/199
3	1.50/38	41.5/1054	31.0/787	24.0/610	22.0/559	7.75/199
4	1.50/38	55.5/1410	31.0/787	24.0/610	30.0/762	7.75/199
5	1.50/38	69.5/1765	31.0/787	24.0/610	35.0/889	7.75/199

[1] Indicates dimensions of Chilled Water Master Controller for Marine Air multi-stage chillers. Please refer to L-2133 for additional information.

Dimensions



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L-2734A Rev. 20120824

Specifications and availability subject to change without notice.

Environmentally Responsible

Assembled in the USA

Dealer

R-410A Green Gas

MCG Series 90K-180K Modular Chillers

The Standard In Chilled Water Marine Air Conditioning

Marine Air's MCG chilled water series is available in capacities ranging from 24,000 (2 ton) to 180,000 (15 ton) BTU/hr. Featuring a compact base design, MCG modules can be staged to provide a larger system, which is easily retrofitted and serviced in the field. Up to six 15-ton stages can be configured for a system total of 1,080,000 BTU/hr, or 90 tons.

Each refrigerant circuit is hermetically sealed and factory pre-charged with R-410A refrigerant. This environmentally safe refrigerant has exceptional thermodynamic properties and maximizes system efficiency.

Each condensing unit is monitored and protected with freeze controls, high-limit switches, high and low aquastats, and timers. These condensing units can be installed in any convenient location and are unaffected by vibration, moisture or ambient temperatures up to 140°F/60°C.

MCG chillers are monitored and protected by Marine Air's exclusive Digital Diagnostic Controller (DDC), which can be installed remotely. For staged systems, the Chilled Water Master Controller (CWMC) provides central control over each DDC on each module in the system. Up to six modules are supported. The CWMC coordinates all cooling and heating functions, evenly distributes compressor run times, and operates the seawater and circulated water pumps.

MCGs are available in single phase or three phase, 50Hz or 60Hz, and all standard voltages (208, 230, 380, 460 VAC).

Key Benefits

- Compact footprint for installation flexibility
- Aluminum construction is corrosion resistant and lightweight
- Up to six modules can be multiplexed for larger capacities
- Electrical box can be remotely mounted up to 6 ft. (1.8 m)
- Bi-flow expansion valves balance the system between heat and cool modes
- Compact stainless-steel brazed plate heat exchangers for maximum efficiency
- Spiral-fluted cupronickel condenser coil provides maximum heat transfer and corrosion resistance
- Digital Diagnostic Controller (DDC) monitors and protects the system
- Engineered to maximize the performance of R-410A, an environmentally safe refrigerant
- Charged, tested, and leak checked at the factory
- Meets or exceeds all applicable standards and regulation
- Charge Guard protection provides sealed access ports, ensuring environmental protection and chiller module integrity

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Specifications for MCG Series 90K-180K Modular Chillers

Model [1]	MCGV90			MCGV120			MCGV150			MCGV180		
Capacity (BTU/h)	90000			120000			150000			180000		
Voltage (V)	230	380	460	230	380	460	230	380	460	230	380	460
Cycle (Hz)/Phase (Ph)	60/3	50/3	60/3	60/3	50/3	60/3	60/3	50/3	60/3	60/3	50/3	60/3
Full Load Amps (FLA) Cool (A)	20.3	14.7	9.2	25.3	15.4	12.4	30.6	19.9	15.1	38.3	24.1	20.2
Full Load Amps (FLA) Heat (A)	25.5	14.9	13.4	31.3	19.2	15.3	38.9	24.5	19.3	50	29.9	25
Locked Rotor Amps (LRA) (A)	235	110		267	147	142	304	197	147	351	239	197
Max. Circuit Breaker (A)	100	56	42	103	60	51	144	86	67	168	55	86
Min. Circuit Ampacity (A)	57	32	24	58	38	29	80	49	38	94	55	49
Refrigerant Type	R410A			R410A			R410A			R410A		
Height-Without Elec. Box (in/mm) [2]	27.66/703			33.61/854			46.24/1175			49.5/1258		
Height-With Elec. Box (in/mm) [2]	31.07/790			37.71/958			N/A			N/A		
Width-Drain Pan (in/mm)	16/407			16/407			18.63/474			18.63/474		
Max. Width (in/mm) [2]	17.37/442			17.4/442			19.5/496			19.5/496		
Depth-Drain Pan (in/mm) [2]	24/610			24/610			26.75/680			26.75/680		
Max. Depth (in/mm) [2]	30.84/784			30.84/784			31.88/810			31.88/810		
Seawater Inlet Connection (in/mm)	1½ /39			1½ /39			2 /51			2 /51		
Chilled Water Connection Size (in)	1½			1½			2			2		
Height-Electrical Box (in/mm) [2]	13.3/338			13.3/338			N/A			N/A		13.3/338
Width-Electrical Box (in/mm)	12/305			12/305			N/A			N/A		12/305
Depth-Electrical Box (in/mm)	4.3/110			4.3/110			N/A			N/A		4.3/110

[1] For information about net weight and shipping weight please contact a Dometic Marine sales representative at 954-973-2477.

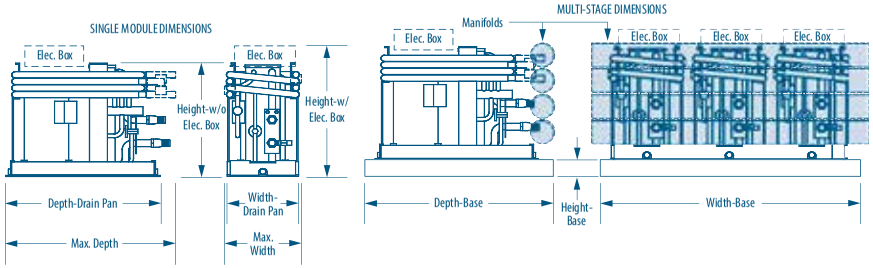
[2] All dimensions ± 0.30 in. (8 mm).

Dimensions for Multi-Stage Systems

No. of Stages	Height-Base (in/mm)	Width-Base (in/mm)	Depth-Base (in/mm)	Height-CWMC [1] (in/mm)	Width-CWMC [1] (in/mm)	Depth-CWMC [1] (in/mm)
MCG90 to MCG120 Modules						
2	3.0/76	36.0/914	35.5/902	24.0/610	22.0/559	7.75/199
3	3.0/76	53.5/1359	35.5/902	24.0/610	22.0/559	7.75/199
4	3.0/76	72.5/1816	35.5/902	24.0/610	30.0/762	7.75/199
5	3.0/76	88.5/2248	35.5/902	24.0/610	35.0/889	7.75/199
MCG150 to MCG180 Modules						
2	3.0/76	39.25/997	38.75/984	24.0/610	22.0/559	7.75/199
3	3.0/76	59.88/1521	38.75/984	24.0/610	22.0/559	7.75/199
4	3.0/76	80.5/2045	38.75/984	24.0/610	30.0/762	7.75/199
5	4.0/102	101.13/3569	38.75/984	24.0/610	35.0/889	7.75/199

[1] Indicates dimensions of Chilled Water Master Controller for Marine Air multi-stage chillers. Please refer to L-2133 for additional information.

Dimensions



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L-2734B Rev. 20121130

Specifications and availability subject to change without notice.

Environmentally Responsible

Assembled in the USA

Dealer

Staged Chilled Water (SCG) Air Conditioning

Custom High-Capacity Marine HVAC Systems

Staged Chilled Water (SCG) R-410A large-capacity systems consist of two to six modules, and are available in capacities ranging from 48,000 (4 ton) to 1,080,000 (90 ton) BTU/hr. The marine-grade compressors come in single phase or three phase, 50Hz or 60Hz, and all standard voltages (208, 230, 380, 460 VAC). Multiple compressors and refrigerant circuits are incorporated to provide minimal power consumption versus load demands, as well as redundancy throughout the unit. Each condensing unit is monitored and protected with freeze controls, high-limit switches, high and low aquastats, timers and on-board fuses or breakers.

Cupro-nickel condenser coils provide high corrosion resistance. Unique stainless-steel evaporator plates are designed for maximum efficiency of heat transfer. SCG systems can be built with the circulation pump mounted in the chiller frame. Frames are welded with marine-grade aluminum alloy, primed, then finished with a corrosion resistant epoxy.

SCG systems can provide heating in a variety of ways, depending upon the requirements. Reverse-cycle provides the most efficient heating, but requires a seawater temperature ≥ 40°F (5°C). Electric heating provides adequate capacities for vessels operating in all waters, but is limited by the capability of the power source. Auxiliary heating is available through the use of heating elements installed in the air handlers. Each of these elements provides 1-3 kW of heat that can be operated independently or in combination with the central heating circuit to maintain optimal temperatures.

SCG systems can be installed in any convenient location and are highly resistant to vibration, moisture or ambient temperatures up to 140°F/60°C. All access ports to the refrigerant system are protected with Charge Guard®, a factory installed seal, ensuring system integrity from shipping through final installation.Units meet or exceed Coast Guard regulations.

Key Benefits

- Two- to six-stage high-capacity systems
- Built-in redundancy - the system will continue to function in the event a circuit fails
- Spiral-fluted cupronickel condenser coil provides maximum heat transfer and corrosion resistance
- Copper-brazed stainless-steel plate heat exchangers for maximum efficiency
- Thermal expansion valves automatically adjust to changing load requirements
- Modules are protected by a circuit breaker, blow switch, freeze protection, water temperature high limit, high-pressure refrigerant switch, and low-pressure refrigerant switch
- Sturdy and lightweight aluminum frame
- Complete control circuit provides multiple fail safes for system protection
- Custom frame designs available to fit virtually any space requirement
- Available with Chilled Water Master Controller (CWMC) or Tempered Water Logic Control (TWLC) for precise operation and monitoring of the system

MARINE AIR SYSTEMS®
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Electrical Specifications for Individual Compressors

Capacity [1]	Voltage [2]	Cycle (Hz)/Phase	Full Load Amps (FLA) Cool	Full Load Amps (FLA) Heat	Locked Rotor Amps (LRA)
24,000 BTU/hr	208-240	60/1	6.4	10.9	58.3
	220-240	50/1	7.5	11.6	67.0
	208-230	60/3	5.5	7.3	58.0
	440-480	60/3	2.7	4.0	28.0
36,000 BTU/hr	208-240	60/1	10.9	15.6	112.0
	220-240	50/1	11.6	16.9	97.0
	208-230	60/3	7.3	9.4	88.0
	440-480	60/3	4.0	5.2	44.0
48,000 BTU/hr	208-240	60/1	13.0	19.1	135.0
	220-240	50/1	14.4	20.7	136.0
	208-230	60/3	9.1	12.2	98.0
	440-480	60/3	4.7	6.2	46.0
	380-420	50/3	4.9	7.0	51.5
60,000 BTU/hr	208-240	60/1	17.0	24.7	158.0
	220-240	50/1	21.5	30.1	176.0
	208-230	60/3	10.6	14.4	110.0
	440-480	60/3	6.2	8.2	75.0
	380-420	50/3	6.8	9.1	74.0
72,000 BTU/hr	208-240	60/1	23.3	32.5	148.0
	208-230	60/3	14.2	18.2	149.0
	440-480	60/3	6.9	9.1	75.0
	380-420	50/3	9.0	11.7	101.0
90,000 BTU/hr	208-230	60/3	19.5	24.9	195.0
	440-480	60/3	9.8	12.4	95.0
	380-420	50/3	10.8	13.6	111.0
120,000 BTU/hr	208-230	60/3	25.3	32.8	239.0
	440-480	60/3	12.7	16.4	125.0
	380-420	50/3	13.3	17.8	118.0
150,000 BTU/hr	208-230	60/3	29.5	38.0	245.0
	440-480	60/3	13.8	18.0	125.0
	380-420	50/3	21.2	26.2	173.0
180,000 BTU/hr	208-230	60/3	41.9	52.0	340.0
	440-480	60/3	21.2	26.2	173.0
	380-420	50/3	25.5	31.7	196.0

[1] Due to the number of variables, physical dimensions and weights for complete SCW and SCG systems are not listed here. Please contact Dometic Marine at 954-973-2477 to discuss your system with a sales representative.

[2] For more information regarding compressor voltages, please refer to field notice (FNR) #192-B3-M.

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L-2136 Rev. 20120824

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Environmentally Responsible

Assembled in the USA

Dealer

MTS High-Capacity Modular Chillers

With Marine-Grade Shell-and-Tube Condenser

MTS systems are high-capacity, marine-grade shell-and-tube chiller modules designed for large pleasure yachts and commercial vessels. Optional electric-immersion heating can provide on-board comfort year round.

MTS chillers have a hermetic scroll compressor and a shell-and-tube marine-grade condenser, along with other mechanical and electrical components on a single chassis. Multiple modules can be staged as needed to meet the required load. Up to six modules are supported.

MTS chillers are designed for easy installation in tight spaces. They provide easy front access for repair and maintenance of condenser tubes, heater rods, flow switch, compressor, and replaceable drier cores. Safety measures include high-pressure switch, refrigerant pressure-relief valve, low-pressure switch, flow switch, high-limit switch, and freeze protection.

A filter drier keeps refrigerant oil clean and dry for long compressor life. With 100 percent pump-down capacity, refrigerant circuit repairs can be made without recovering the refrigerant.

The MTS 25-ton (279,000 BTU/hr) chiller is available in 380V and 460V models.

Key Benefits

- Up to six modules can be multiplexed for larger capacities
- Hermetically-sealed compressor
- Marine-grade cupronickel shell-and-tube condenser
- High-pressure switch and pressure-relief valve for safety
- Dual bottom draining liquid connections for optimal performance in choppy seas
- Filter drier keeps refrigerant oil clean and dry for long compressor life
- 100% pump-down capacity for making circuit repairs without recovering the refrigerant
- Optional variable frequency drives smooth out compressor startup power demand

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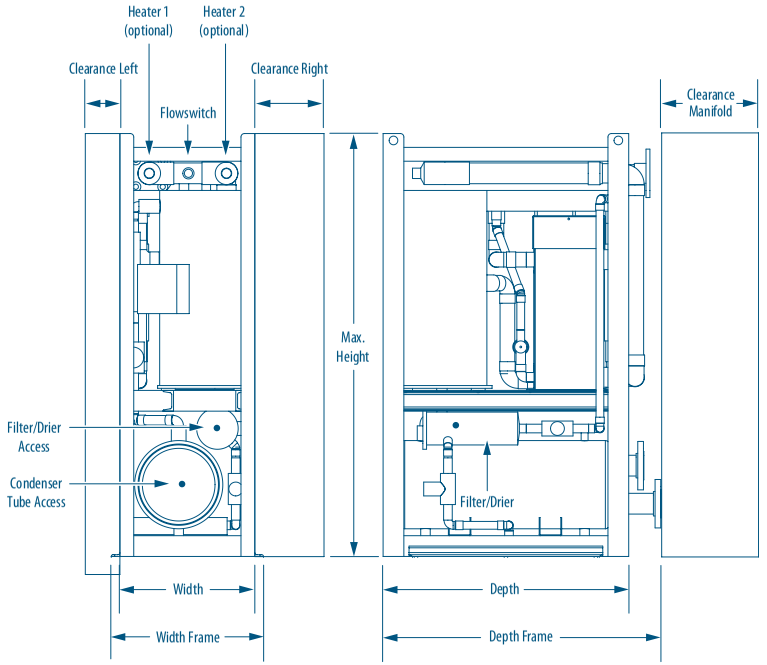
Specifications for MTS High-Capacity Modular Chillers

Model	MTS 25-Ton Modular Chiller	
Voltage (V)	380	460
Cycle (Hz)/Phase (Ph)	50/3	60/3
Max. Height (in/mm) [1]	61.2/1555	
Max. Width (in/mm) [1][2]	19.5/496	21.75/553
Max. Depth (in/mm) [1][3]	35.5/902	40.2/1022
Width Frame (in/mm) [1]	21.8/554	19.5/496
Depth Frame (in/mm) [1]	40.2/1022	35.5/902
Clearance Left (in/mm)	5/127	
Clearance Right (in/mm)	10/254	
Clearance Manifold (in/mm)	8/204	

[1] All dimensions ± 0.30 in. (8 mm).
[2] For staged modules, add a clearance of 5 in. (127 mm) and 10 in. (254 mm), alternately, between modules.
[3] Allow 8 in. (203 mm) on water connection side for manifolds without isolation valve, and 14 in. (356 mm) for manifolds with isolation valve.

Dimensions



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L-2467 Rev. 20120824

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Environmentally Responsible

Assembled in the USA

Dealer

New EU Package

Gold Series (AU-HV) Air Handlers

Rust-Free, Anti-Slosh Drain Pan With Quick & Easy Installation

Completely redesigned for easier installation and improved performance, Gold Series air handlers, recipient of an Honorable Mention at the 2012 International Boatbuilders Exhibition and Conference (IBEX), incorporate many innovative features, including an optional Breathe Easy™ air purifier.

A rust-free, anti-slosh, positive-flow drain pan quickly removes condensate water and a third drain hole can be employed to further increase drainage. Each drain hole is reinforced and has an external stop to prevent over tightening of the screw-in hose barb.

To better accommodate a variety of installations, each drain hole can accept either a straight or 90-degree hose barb. In addition, the vibration-isolation mounting hardware can be attached at a variety of locations along the perimeter of the drain pan.

Gold Series AU-HV air handlers feature high-velocity (HV) blowers. The rotatable blower ring can be positioned easily by adjusting a single screw, and can even blow directly downward (best achieved with the right-oriented version). Optional DC "WhisperCool" blowers are available.

The blower inlet adapter is made of a high-temperature resin to easily withstand the heat generated by the optional internal electric heating element. Gold Series air handlers provide easy access to the manual heater-overload safety switch, which is accessible without disassembling the unit.

The optional integrated Breathe Easy air purifier is positioned directly in the airstream and uses ultraviolet (UV) light and photocatalytic nano-mesh technology to improve air quality without producing any harmful ozone. The award-winning Breathe Easy eliminates odors and up to 99.9% of VOCs and biological contaminants.

The drain pan features anti-slosh, positive-flow condensate channels, reinforced drain holes, and moveable vibration-isolation mounting clips.

The Gold air handler's HV blower can be easily rotated in the field by loosening the single adjustment screw on the blower collar (standard AU model shown).

The assembly for the optional electric heater (top) and Breathe Easy air purifier (bottom) fits between the coil and blower (standard AU model shown).

Key Benefits

- Rust-free composite drain pan
- Drain pan features anti-slosh, "positive-flow" drain channels for no spills and rapid removal of condensate
- Vibration-isolation mounts reduce noise and vibration
- Improved insulation
- Single adjustment screw for 270° of blower rotation
- Blower can be rotated to straight down position for overhead applications
- Easy access to heater overload reset button
- Flexible mounting options
- Braided, kink-proof air bleeder hose
- Reinforced drain holes prevent overtightening of hose barbs

Special Options

- Optional EU package upgrades include improved insulation and wire loom, protective cover for water-tube hairpins, and more (see reverse side for details)
- Optional DC "WhisperCool" blowers are extremely quiet yet powerful enough to overcome high-static-pressure duct
- Optional integrated Breathe Easy™ air purifier stops odors and is up to 99.9% effective in neutralizing contaminants in the air you breathe (not available for 6K BTU models)
- Optional electric heat
- Optional flow control automatically balances circulated water throughout the system
- Optional Breathe Easy™ microparticle air filter
- Left-oriented blower models

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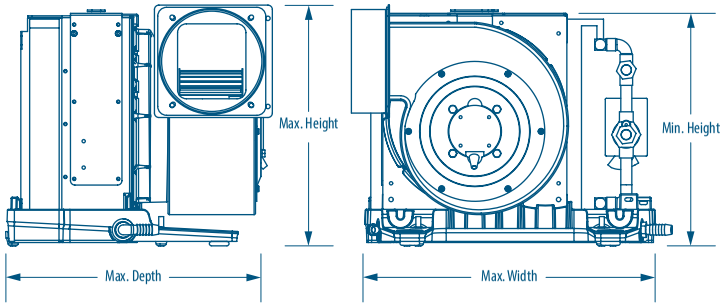
Specifications for Gold Series (AU-HV) Air Handlers

Model [1]	AU6HV		AU9HV		AU12HV		AU18HV		AU24HV	
Nominal Capacity - Cool (BTU/h)	6000		9000		12000		18000		24000	
Nominal Capacity - Heat (BTU/h)	TBD		5118		6824		10236		10236	
Voltage @ 50/60Hz 1-Ph (V)	230	115	230	115	230	115	115	230	230	115
Full Load Amps (FLA) Cool (A)	0.83	1.56	0.61	1.14	0.78	1.61	2.52	1.18	1.64	3.4
Full Load Amps (FLA) Heat (A)	5.18	10.26	4.96	9.84	7.3	14.65	28.61	14.22	14.68	29.49
Optional Electric Heat (kW)	1		1.5		1.5		3		3	
Max. Circuit Breaker (A)	10	15	10	15	10	20	30	15	20	35
Min. Circuit Ampacity (A)	6	11	6	11	8	16	30	15	16	31
Water Flow (gpm/lpm)	TBD		2.3/8.8		3/11.4		4.5/17.1		6/22.8	
Air Flow (cfm/m3h)	TBD		278/473		338/575		465/791		506/860	
External Static Pressure (inH2O/Pa)	TBD		0.3/74.7		0.3/74.7		0.3/74.7		0.3/74.7	
Min. Height (in/mm)	11.19/285		13.31/339		13.31/339		13.94/355		15.25/388	
Max. Height (in/mm) [2]	12.13/309		13.31/339		13.38/340		15.38/391		16.75/426	
Max. Width (in/mm) [2]	14.5/369		16.5/420		16.5/420		20.13/512		22.63/575	
Max. Depth (in/mm) [2]	12.56/320		13.25/337		14.25/362		15/381		15.38/391	
Chilled Water Connection Size (in)	½		½		½		½		½	
Min. Supply Duct Size (in/mm)	5/127		6/153		6/153		7/178		8/204	
Min. Supply Air Grille Size (sq in/sq cm)	35/226		49/317		70/452		100/646		140/904	
Min. Return Air Grille Size (sq in/sq cm)	70/452		98/633		130/839		200/1291		240/1549	

[1] Model numbers shown are for 115V units with high-velocity (HV) blowers. Add a 'Z' for 230V units; add '-FC' for optional flow control; add '-L__' or '-R__' for valve position (relative to the coil) and angle of the blower; add '__kW' for amount of optional electric heat in kilowatts (for ex. 1.5kW). See DWG H3050002 for a visual explanation of valve orientation and blower angle.

[2] All dimensions ± 0.30 in. (8 mm).

Dimensions



About the EU Package

The EU Package includes several upgrades for reduced installation time and an improved appearance.

A plastic cover (A) protects the exposed water-tube hairpins. An upgraded wire loom (B) is used for better aesthetics and all electrical connections use quick plugs (C) so there are no wires to connect. A new durable bleeder assembly with cradle (D) gives easy access and speeds the air bleeding process.

A capacitor, protected under a plastic housing (E), replaces the electrical box. In addition, a slave box can be used to control multiple air handlers from a single cabing control, all with plug-in connections. The plumbing connections (F) are shorter so the installation takes up less space.

Key Benefits

- Quick-plug electrical connections
- Upgraded wire loom for improved appearance
- Less space needed for plumbing connections
- Easy access to bleeder assembly

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L-3022 Rev. 20140117

Specifications and availability subject to change without notice.

Environmentally Responsible

Assembled in the USA

Dealer

AT-HV Series Air Handlers

Compact Units With High-Velocity Blowers

The AT-HV series of air handlers for marine HVAC chilled water systems are draw-though (ducted) units with high-velocity (HV) blowers. The AT-HV series replaces Flex-Duct and Draw-Through series air handers, and has many improvements and options over the older units.

Significant improvements include: sloped “Positive-Flow” drain pan which reduces standing water, larger drain connections, improved coil design for better cooling and dehumidifying performance, coil is offset from drain pan edge to ensure all condensation is caught in the pan, redesigned piping so the bypass valve is clear of dripping condensation, pressure test ports for troubleshooting, and the new 24,000 BTU/hr unit uses a high-efficiency, internal-motor blower for quieter operation. On units with auxiliary (electric) heat, the new heater design allows removal from the top or side for access or servicing.

All Marine Air air handlers use corrosion-resistant materials. They feature "positive-flow" drain pans with anti-slosh foam lining and are fully insulated against secondary condensation. Electric heat is optional.

AT air handlers are available with "WhisperCool" brushless DC blowers (AT-DC series).

Key Benefits

- Compact design
- High-velocity (HV) fully-insulated blowers are rotatable
- Improved cooling and dehumidification
- Drain pan has anti-slosh, anti-fungal foam lining
- Vibration-isolation mounts reduce noise and vibration.
- Exposed sheet metal is insulated against secondary condensation
- Remote air bleeder on 6 ft. (1.8 m) of flexible tubing with ball valve
- Electrical box can be remotely mounted up to 6 ft. (1.8 m)
- Water-pressure test ports for troubleshooting
- Allowance for connecting variable fan-speed drives
- Rotatable blowers
- Optional flow control automatically balances circulated water throughout the system
- Optional Electric Heat
- Optional Breathe Easy™ microparticle air filter

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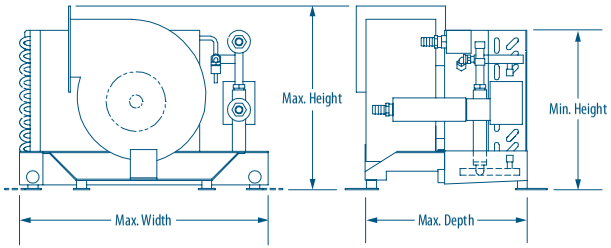
Specifications for AT-HV Series Air Handlers

Model [1]	AT4HV		AT6HV		AT9HV		AT12HV		AT18HV		AT24HV		AT36HV
Nominal Capacity - Cool (BTU/h)	4000		6000		9000		12000		18000		24000		36000
Nominal Capacity - Heat (BTU/h)	TBD		3412		5118		6824		10236		10236		13648
Voltage @ 50/60Hz 1-Ph (V)	115	230	115	230	115	230	115	230	115	230	230	115	230
Full Load Amps (FLA) Cool (A)	1.06	0.41	1.6	0.9	1.1	0.6	1.5	0.7	2.3	1.18	1.15	2.3	1.62
Full Load Amps (FLA) Blower (A)	0.8	0.4	1.2	0.6	1.4	0.7	1.4	0.7	2.2	1	1	2.2	1.6
Optional Electric Heat (kW)	N/A		1		1.5		2		3		3		4
Max. Circuit Breaker (A)	5		5		5		5		5		5		5
Min. Circuit Ampacity (A)	2	1	2		2	1	2	1	3	2	2	3	3
Water Flow (gpm/lpm)	1/3.8		1.5/5.7		2.3/8.8		3/11.4		4.5/17.1		6/22.8		9/34.1
Air Flow (cfm/m3h)	130/221		229/390		278/473		338/575		465/791		506/860		676/1149
External Static Pressure (inH2O/Pa)	0.3/74.7		0.3/74.7		0.3/74.7		0.3/74.7		0.3/74.7		0.3/74.7		0.3/74.7
Min. Height (in/mm) [2]	9.75/248		10.25/261		12.13/309		12.05/307		15/381		15.94/405		20/508
Max. Height (in/mm) [2]	9.75/248		11.25/286		13.31/339		13.88/353		15/381		15.94/405		20/508
Max. Width (in/mm) [2]	15/381		15.25/388		16.88/429		18.75/477		20.38/518		22.63/575		26.63/677
Max. Depth (in/mm) [2]	10.25/261		12.38/315		12.13/309		12.5/318		13.5/343		15/381		15.81/402
Drain Connection Size (in)	½		½		½		½		½		½		½
Drain Connection Type	FPT		FPT		FPT		FPT		FPT		FPT		FPT
Chilled Water Connection Size (in)	½		½		½		½		½		½		½
Chilled Water Connection Type	FPT		FPT		FPT		FPT		FPT		FPT		FPT
Min. Supply Duct Size (in/mm)	4/102		5/127		6/153		6/153		7/178		8/204		8/204
Min. Supply Air Grille Size (sq in/sq cm)	32/207		35/226		49/317		70/452		100/646		140/904		196/1265
Min. Return Air Grille Size (sq in/sq cm)	64/413		70/452		98/633		130/839		200/1291		240/1549		360/2323
Height-Electrical Box (in/mm)	8/204		8/204		8/204		8/204		8/204		8/204		8/204
Width-Electrical Box (in/mm)	6.13/156		6.13/156		6.13/156		6.13/156		6.13/156		6.13/156		6.13/156
Depth-Electrical Box (in/mm)	2/51		2/51		2/51		2/51		2/51		2/51		2/51

[1] Model numbers shown are for 115V units with high-velocity (HV) blowers. Add a 'Z' for 230V units; add '-FC' for optional flow control; add '-L__' or '-R__' for valve position (relative to the coil) and angle of the blower; add '__kW' for amount of optional electric heat in kilowatts (for ex. 1.5kW). See DWG H3050002 for a visual explanation of valve orientation and blower angle.

[2] All dimensions ± 0.30 in. (8 mm).

Dimensions



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L-2355 Rev. 20140117

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Environmentally Responsible

Assembled in the USA

Dealer

WhisperCool Technology

AT-DC Series Air Handlers

Compact Units With DC "WhisperCool" Blowers

The AT-DC series of chilled water air handlers represents the new standard in marine HVAC engineering that you'll barely notice. Thanks to "WhisperCool" technology, the AT-DC series harnesses engineering refinements to eliminate the annoying "motor hum" heard from ordinary air handlers operating at very low fan speeds. Incoming alternating current is converted to drive a brushless DC internal blower motor, resulting in super-quiet and highly-efficient performance across all fan speeds.

Additional design changes in the air handlers eliminate condensate drain problems, reduce dripping condensation and standing water issues. An improved coil enhances cooling and dehumidification performance. The redesigned unit also creates easily accessible water-pressure test points for troubleshooting and maintenance.

All Marine Air air handlers use corrosion-resistant materials. They feature "positive-flow" drain pans with anti-slosh foam lining and are fully insulated against secondary condensation. Electric heat is optional.

Key Benefits

- DC "WhisperCool" blowers are extremely quiet yet powerful enough to overcome high-static-pressure duct
- Improved cooling and dehumidification
- Drain pan has anti-slosh, anti-fungal foam lining
- Vibration-isolation mounts reduce noise and vibration.
- Exposed components are insulated against secondary condensation
- Remote air bleeder on 6 ft. (1.8 m) of flexible tubing with ball valve
- Electrical box can be remotely mounted up to 6 ft. (1.8 m)
- Rotatable blowers
- Optional flow control automatically balances circulated water throughout the system
- Optional Electric Heat
- Optional Breathe Easy™ microparticle air filter

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Specifications for AT-DC Series Air Handlers

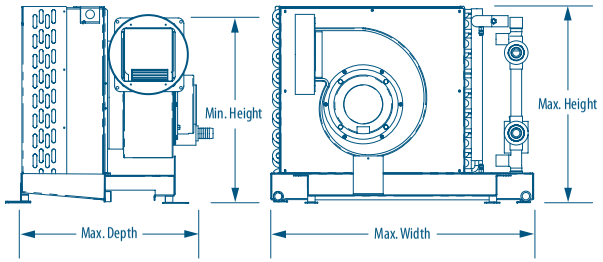
Model [1]	AT6DC	AT9DC	AT12DC	AT18DC	AT24DC	AT36DC
Nominal Capacity - Cool (BTU/h)	6000	9000	12000	18000	24000	36000
Nominal Capacity - Heat (BTU/h)	3412	3412	5118	5118	10236	10236
Voltage @ 50/60Hz 1-Ph (V)	230	230	230	230	230	230
Full Load Amps (FLA) Cool (A) [2]	1.4	1.4	3.2	3.9	3.9	3.9
Full Load Amps (FLA) Blower (A)	1.4	1.4	3.2	3.9	3.9	3.9
Optional Electric Heat (kW)	1	1	1.5	1.5	3	3
Heater Amps (A)	4.3	4.3	6.5	6.5	13	13
Max. Circuit Breaker (A)	5	5	5	5	5	5
Min. Circuit Ampacity (A)	2	2	4	5	5	5
Water Flow (gpm/lpm)	1.5/5.7	2.25/8.6	3/11.4	4.5/17.1	6/22.8	9/34.1
Air Flow (cfm/m3h)	200/340	300/510	400/680	600/1020	700/1190	800/1360
External Static Pressure (inH2O/Pa)	2.9/722.1	2.8/697.2	2.6/647.4	2.1/522.9	1.4/348.6	0.5/124.5
Min. Height (in/mm) [3]	11.08/282	11.79/300	12.05/307	14.83/377	16.7/425	16.74/426
Max. Height (in/mm) [3]	13.63/347	13.73/349	13.94/355	16.94/431	16.7/425	19.74/502
Max. Width (in/mm) [3]	14.81/377	16.48/419	18.75/477	20.08/511	22.48/571	26.41/671
Max. Depth (in/mm) [3]	14.27/363	14.55/370	14.49/369	14.83/377	16.42/418	17.15/436
Drain Connection Size (in)	½	½	½	½	½	½
Drain Connection Type	FPT	FPT	FPT	FPT	FPT	FPT
Chilled Water Connection Size (in)	½	½	½	½	½	½
Chilled Water Connection Type	FPT	FPT	FPT	FPT	FPT	FPT
Min. Supply Duct Size (in/mm)	5/127	6/153	6/153	7/178	8/204	8/204
Min. Supply Air Grille Size (sq in/sq cm)	35/226	49/317	70/452	100/646	140/904	196/1265
Min. Return Air Grille Size (sq in/sq cm)	70/452	98/633	130/839	200/1291	240/1549	360/2323
Height-Electrical Box (in/mm)	8/204	8/204	8/204	8/204	8/204	8/204
Width-Electrical Box (in/mm)	6.13/156	6.13/156	6.13/156	6.13/156	6.13/156	6.13/156
Depth-Electrical Box (in/mm)	2/51	2/51	2/51	2/51	2/51	2/51

[1] '2' indicates 230V. Add '-FC' for optional flow control; add '-LX' or '-RX' for valve position (relative to the blower side of the coil) and angle of the blower ('-R0' is the default); add '#kW' for amount of optional electric heat in kilowatts.

[2] Blower amps will be reduced at lower speed/cfm or higher static pressure. Amps listed are at free air.

[3] All dimensions ± 0.30 in. (8 mm).

Dimensions



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L-2426A Rev. 20120824

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Environmentally Responsible

Assembled in the USA

Dealer

ATL-HV Series Low-Profile Air Handlers

Ideal for Height-Restrictive Installations; High-Velocity Blowers

The ATL-HV series of chilled water air handlers represents an improved design approach to low-profile, draw-through air handlers. These "open top" units allow easier maintenance access and reduced dimensions overall.

The top panel of ATL units can be removed for maintenance access to the blower(s). In this way, the unit can be serviced without disturbing the drain pan. The drain stems face aft (toward the blower side) to minimize footprint. Furthermore, the optional electric heaters are mounted on the blower discharge instead of inside the plenum, thereby eliminating the depth added to the plenum area for 6K-18K units.

The ATL-HV series features dual high-velocity (HV) blowers. Optional "WhisperCool" DC blowers are available. These blowers are ultra quiet yet strong enough to overcome high-static-pressure duct.

Capacities of the ATL-HV series are 6,000, 9,000, 12,000, 18,000, and 24,000 BTU/hr. A 16,000 BTU/hr unit is available (ATL16F) with dual tangential blowers. All ATL blowers are mounted horizontally for an exceptionally low profile, making these units ideal for height-restrictive installations. They can be suspended from above or supported from beneath and suspension hardware is included. Vibration-isolation mounts reduce noise and the transmission of vibrations to the installation platform.

The drain pan has an anti-slosh, anti-fungal foam lining and extends to under the valve motor and plumbing. The water connections are insulated against secondary condensation, and the valve can be mounted on the left (standard) or right (optional).

Key Benefits

- Suspend from above or support from beneath (hardware included)
- Vibration-isolation mounts reduce noise and vibration.
- Bypass valve has removable power head for simple servicing
- Valve body is soldered to unit to prevent leaks
- The electrical box can be mounted remotely up to six feet away
- Remote air bleeder on six feet (1.8m) of flexible tubing with easy-operating ball valve
- Optional DC "WhisperCool" blowers are extremely quiet yet powerful enough to overcome high-static-pressure duct
- Valve on left (standard) or on right (optional)
- Automatic flow control helps balance chilled water distribution throughout the boat

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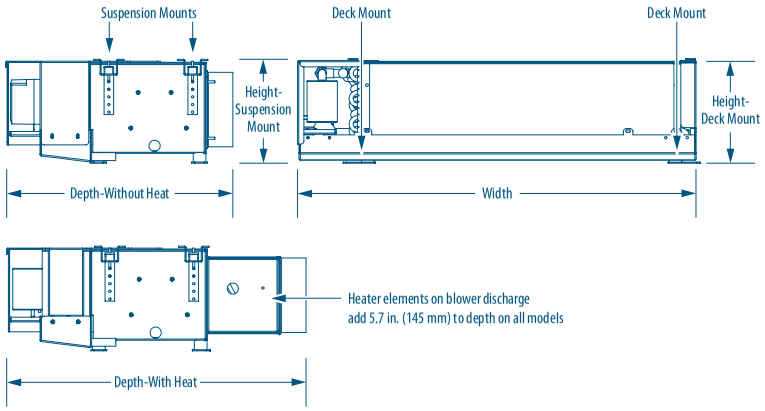
Specifications for ATL-HV Series Low-Profile Air Handlers

Model [1]	ATL6HV	ATL9HV	ATL12HV		ATL18HV	ATL24HV		ATL16F	
Nominal Capacity (BTU/h)	6000	9000	12000		18000	24000		16000	
Voltage @ 50/60Hz 1-Ph (V)	230	230	115	230	230	115	230	115	230
Full Load Amps (FLA) Cool (A)	0.9	0.6	3.12	1.8	1.8	2.3	1.15	2.4	0.62
Full Load Amps (FLA) Blower (A)	0.7	0.5	3.2	1.4	1	3.4	1.3	2.4	0.9
Optional Electric Heat (kW) [2]	1	1	2		2	1.5		N/A	
Heater Amps (A)	5	4.8	20.6	10.1	9.7	16.4	7.8	N/A	
Max. Circuit Breaker (A)	5	5	5		5	5		5	
Min. Circuit Ampacity (A)	2	1	4	3	3	3	2	3	1
Water Flow (gpm/lpm)	1.5/5.7	2.25/8.6	3/11.4		4.5/17.1	6/22.8		4/15.2	
Air Flow (cfm/m3h) [3]	200/340	275/468	400/680		550/935	730/1241		420/714	
External Static Pressure (inH2O/Pa)	0.3/74.7	0.3/74.7	0.3/74.7		0.3/74.7	0.3/74.7		0.3/74.7	
Height-Deck Mount (in/mm) [4]	8/204	8/204	8.1/206		8.1/206	10/254		8.1/206	
Height-Suspension Mount (in/mm)	8.1/206	8.1/206	8.1/206		8.1/206	10.1/257		8.1/206	
Max. Width (in/mm) [5]	19.6/498	19.6/498	31.6/803		31.6/803	42.9/1090		23.4/595	
Depth-Without Heat (in/mm)	18/458	19.7/501	17.9/455		25.5/648	22/559		17.6/448	
Depth-With Heat (in/mm)	23.7/602	25.4/646	23.6/600		19.8/503	27.7/704		N/A	
Drain Connection Size (in)	½	½	½		½	½		½	
Drain Connection Type	tube stubs	tube stubs	tube stubs		tube stubs	tube stubs		tube stubs	
Chilled Water Connection Size (in)	½	½	½		½	½		½	
Chilled Water Connection Type	FPT	FPT	FPT		FPT	FPT		FPT	
Min. Supply Duct Size (in/mm)	6/153	6/153	6/153		6/153	8/204		4/102	
Min. Supply Air Grille Size (sq in/sq cm)	35/226	49/317	35/226		49/317	147/949		40/259	
Min. Return Air Grille Size (sq in/sq cm)	70/452	98/633	130/839		200/1291	240/1549		144/930	
Pan Style	sloped	sloped	sloped		sloped	sloped		sloped	

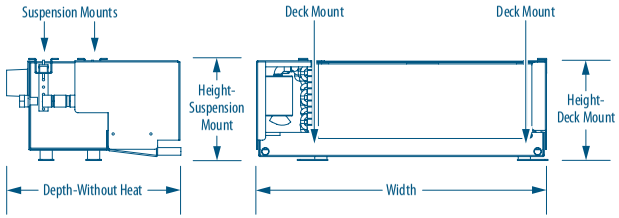
[1] Add '-FC' at end of model name for optional flow control; the default valve position is to the left of the coil (as one faces it), so add 'R' to the model for the valve on the right side; add '#kW' for amount of optional electric heat in kilowatts.
[2] 1.5kW is recommended for the ATL24 because it has one blower. 2kW is the maximum.
[3] Air flow data is for units without electric heat. Electric heat reduces air flow by an amount to be determined.
[4] All dimensions ± 0.30 in. (8 mm).
[5] ATL12, ATL18, and ATL36 models have dual blowers and therefore two supply duct rings.

Dimensions

ATL-HV SERIES DIMENSIONS



ATL16F DIMENSIONS



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L-2551 Rev. 20120713

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Environmentally Responsible

Assembled in the USA

Dealer

WhisperCool Technology

ATL-DC Series Low-Profile Air Handlers

Whisper Quiet Units Ideal for Height-Restrictive Spaces

The ATL-DC series of chilled water air handlers represents an improved design approach to low-profile, draw-through air handlers. These "open top" units allow easier maintenance access and reduced dimensions overall.

The top panel of ATL units can be removed for maintenance access to the blower(s). In this way, the unit can be serviced without disturbing the drain pan. The drain stems face aft (toward the blower side) to minimize footprint. Furthermore, the optional electric heaters are mounted on the blower discharge instead of inside the plenum, thereby eliminating the depth added to the plenum area for 6K-18K units.

The ATL-DC series features "WhisperCool" DC blowers that are ultra quiet yet strong enough to overcome high-static-pressure duct.

Capacities of the ATL-DC series range from 6,000 to 36,000 BTU/hr. The blowers are mounted horizontally for an exceptionally low profile, making these units ideal for height-restrictive installations. They can be suspended from above or supported from beneath and suspension hardware is included. Vibration-isolation mounts reduce noise and the transmission of vibrations to the installation platform.

The drain pan has an anti-slosh, anti-fungal foam lining and extends to under the valve motor and plumbing. The water connections are insulated against secondary condensation, and the valve can be mounted on the left (standard) or right (optional).

Key Benefits

- DC "WhisperCool" blowers are extremely quiet yet powerful enough to overcome high-static-pressure duct
- Improved design for easier servicing, smaller dimensions overall
- Top panel is removable for easier service access
- Dual blowers are mounted horizontally for exceptionally low profile
- Suspend from above or support from beneath (hardware included)
- Enclosed design
- Internal components are insulated against secondary condensation
- Vibration-isolation mounts reduce noise and vibration.
- Bypass valve has removable power head for simple servicing
- Valve body is soldered to unit to prevent leaks
- Electrical box can be remotely mounted up to 6 ft. (1.8 m)
- Remote air bleeder on 6 ft. (1.8 m) of flexible tubing with ball valve
- Valve on left (standard) or on right (optional)
- Optional flow control automatically balances circulated water throughout the system
- Optional Electric Heat
- Optional Breathe Easy™ microparticle air filter

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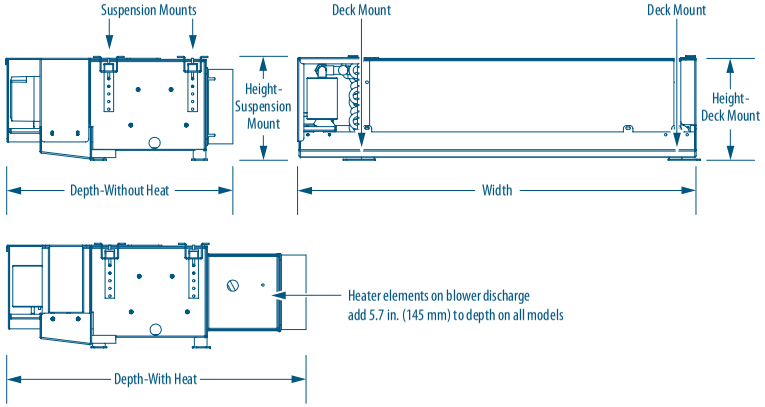
Specifications for ATL-DC Series Low-Profile Air Handlers

Model [1]	ATL6DC	ATL9DC	ATL12DC	ATL18DC	ATL24DC	ATL36DC
Nominal Capacity (BTU/h)	6000	9000	12000	18000	24000	36000
Voltage @ 50/60Hz 1-Ph (V)	230	230	230	230	230	230
Full Load Amps (FLA) Cool (A)	1.4	1.4	2.8	2.8	3.9	7.8
Full Load Amps (FLA) Blower (A)	1.4	1.4	2.8	2.8	1.5	3
Optional Electric Heat (kW) [2]	1	1	2	2	1.5	3
Heater Amps (A)	5.7	5.7	11.5	11.5	8	16
Max. Circuit Breaker (A)	5	5	5	5	5	30
Min. Circuit Ampacity (A)	2	2	4	4	5	23
Water Flow (gpm/lpm)	1.5/5.7	2.25/8.6	3/11.4	4.5/17.1	6/22.8	9/34.1
Air Flow (cfm/m3h) [3]	200/340	275/468	400/680	550/935	670/1139	1000/1700
External Static Pressure (inH2O/Pa)	1.75/435.8	0.6/149.4	1.75/435.8	0.6/149.4	0.3/74.7	0.3/74.7
Height-Deck Mount (in/mm) [4]	8/204	8/204	8/204	8/204	10/254	10/254
Height-Suspension Mount (in/mm) [4]	8.2/209	8.2/209	8.2/209	8.2/209	10.1/257	10.1/257
Max. Width (in/mm) [4]	19.6/498	19.6/498	31.5/801	31.5/801	43.8/1113	61.8/1570
Depth-Without Heat (in/mm) [4]	19.7/501	19.7/501	17.9/455	17.9/455	20.5/521	20.5/521
Depth-With Heat (in/mm) [4]	25.4/646	25.4/646	23.6/600	23.6/600	26.2/666	26.2/666
Drain Connection Size (in)	½	½	½	½	½	½
Drain Connection Type	tube stubs	FPT	tube stubs	tube stubs	tube stubs	tube stubs
Chilled Water Connection Size (in)	½	½	½	½	½	½
Chilled Water Connection Type	FPT	FPT	FPT	FPT	FPT	FPT
Min. Supply Duct Size (in/mm) [5]	6/153	6/153	6/153	6/153	8/204	8/204
Min. Supply Air Grille Size (sq in/sq cm)	35/226	49/317	35/226	49/317	147/949	168/1084
Min. Return Air Grille Size (sq in/sq cm)	70/452	98/633	130/839	200/1291	240/1549	360/2323
Pan Style	sloped	sloped	sloped	sloped	sloped	sloped

[1] Add '-FC' at end of model name for optional flow control; the default valve position is to the left of the coil (as one faces it), so add 'R' to the model for the valve on the right side; add '#kW' for amount of optional electric heat in kilowatts.
[2] 1.5kW is recommended for the ATL24 because it has one blower. 2kW is the maximum.
[3] Air flow data is for units without electric heat. Electric heat reduces air flow by an amount to be determined.
[4] All dimensions ± 0.30 in. (8 mm).
[5] ATL12, ATL18, and ATL36 models have dual blowers and therefore two supply duct rings.

Dimensions



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L-2546 Rev. 20130920

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Environmentally Responsible

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Low-Profile Design

ABL-HV Series Chilled Water Air Handlers

Ideal for Height-Restrictive Installations; High-Velocity Blowers

The ABL-HV series of draw-through air handlers for chilled water systems is ideal for installation in height-restrictive spaces. Insulating foam covers the condensate pan, blower housing, shroud, and coil end cover to reduce noise and secondary condensation. The condensate pan also has an anti-slosh, anti-fungal foam lining. The ABL-HV series is designed to replace the CBLB models.

ABL-HV air handlers are an excellent choice for overhead applications where height is limited. The dual high-velocity (HV) blowers are mounted at a 90 degree angle to the evaporator coil for dramatically reduced depth. The optional cushioned mounts, which minimize vibration and noise, allow the unit to be suspended from above or supported from beneath.

ABL-HV air handlers are constructed with corrosion-resistant materials. They feature "positive-flow" drain pans with anti-slosh foam lining and are fully insulated against secondary condensation. Electric heat is optional.

Key Benefits

- Dual blowers are mounted at 90-degree angle to the coil for minimum depth
- Suspend from above or support from beneath (suspension hardware sold separately)
- Optional cushioned mounts reduce noise and vibration
- Bypass valve has removable power head for simple servicing
- Valve body is soldered to unit to prevent leaks
- Exposed components are insulated against secondary condensation
- Electrical box can be remotely mounted up to 6 ft. (1.8 m)
- Remote air bleeder on 6 ft. (1.8 m) of flexible tubing with ball valve
- Valve on left (standard) or on right (optional)
- Optional flow control automatically balances circulated water throughout the system
- Optional Electric Heat
- Optional Breathe Easy™ microparticle air filter

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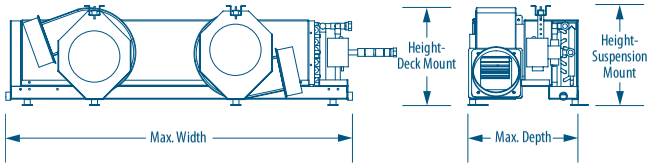
Specifications for ABL-HV Series Chilled Water Air Handlers

Model	ABL18HV	ABL24HV
Nominal Capacity (BTU/h)	18000	24000
Voltage @ 50/60Hz 1-Ph (V)	230	230
Full Load Amps (FLA) Cool (A)	1.32	1.4
Optional Electric Heat (kW)	3	3
Max. Circuit Breaker (A)	5	5
Min. Circuit Ampacity (A)	2	2
Water Flow (gpm/lpm)	4.5/17.1	6/22.8
Height-Deck Mount (in/mm) [1]	11.9/303	11.9/303
Height-Suspension Mount (in/mm) [1]	12.2/310	12.2/310
Max. Width (in/mm) [1]	37.3/948	46/1169
Max. Depth (in/mm) [1]	TBD	15/381
Drain Connection Size (in)	½	½
Drain Connection Type	FPT	FPT
Chilled Water Connection Size (in)	½	½
Chilled Water Connection Type	FPT	FPT
Min. Supply Air Grille Size (sq in/sq cm)	50/323	70/452
Min. Return Air Grille Size (sq in/sq cm)	200/1291	240/1549

[1] All dimensions ± 0.30 in. (8 mm).

Dimensions



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L-2552 Rev. 20120622

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Environmentally Responsible

Assembled in the USA

Dealer

WhisperCool Technology

ABL-DC Series Air Handlers

Whisper Quiet Units Ideal for Height-Restrictive Spaces

The ABL-DC series of marine draw-through air handlers for chilled water systems is ideal for installation in height-restrictive spaces. Insulating foam covers the condensate pan, blower housing, shroud, and coil end cover to reduce noise and secondary condensation. The condensate pan also has an anti-slosh, anti-fungal foam lining. The ABL-DC series is designed to replace the CBLB models.

ABL air handlers are an excellent choice for overhead applications where height is limited. The dual DC "WhisperCool" blowers are ultra quiet yet overcome high-static-pressure duct. The blowers are mounted at a 90 degree angle to the evaporator coil for dramatically reduced depth. The optional cushioned mounts, which minimize vibration and noise, allow the unit to be suspended from above or supported from beneath.

ABL-DC air handlers are constructed with corrosion-resistant materials. They feature "positive-flow" drain pans with anti-slosh foam lining and are fully insulated against secondary condensation. Electric heat is optional.

Key Benefits

- DC "WhisperCool" blowers are extremely quiet yet powerful enough to overcome high-static-pressure duct
- Dual blowers are mounted at 90-degree angle to the coil for minimum depth
- Suspend from above or support from beneath (suspension hardware sold separately)
- Optional cushioned mounts reduce noise and vibration
- Bypass valve has removable power head for simple servicing
- Valve body is soldered to unit to prevent leaks
- Exposed components are insulated against secondary condensation
- Electrical box can be remotely mounted up to 6 ft. (1.8 m)
- Remote air bleeder on 6 ft. (1.8 m) of flexible tubing with ball valve
- Valve on left (standard) or on right (optional)
- Optional flow control automatically balances circulated water throughout the system
- Optional Electric Heat
- Optional Breathe Easy™ microparticle air filter

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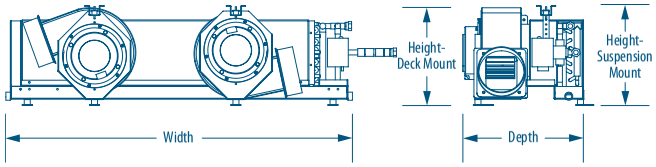
Specifications for ABL-DC Series Air Handlers

Model [1]	ABL18DC	ABL24DC
Nominal Capacity (BTU/h)	18000	24000
Voltage @ 50/60Hz 1-Ph (V)	230	230
Full Load Amps (FLA) Cool (A)	6.4	6.4
Full Load Amps (FLA) Blower (A)	6.4	6.4
Optional Electric Heat (kW)	3	3
Heater Amps (A)	13	13
Max. Circuit Breaker (A)	10	10
Min. Circuit Ampacity (A)	8	8
Water Flow (gpm/lpm)	4.5/17.1	6/22.8
Air Flow (cfm/m3h)	600/1020	800/1360
External Static Pressure (inH2O/Pa)	2.7/672.4	2.5/622.5
Height-Deck Mount (in/mm) [2]	11.9/303	11.9/303
Height-Suspension Mount (in/mm) [2]	12.2/310	12.2/310
Max. Width (in/mm) [2]	37.3/948	43.3/1100
Max. Depth (in/mm) [2]	15.8/402	15.8/402
Drain Connection Size (in)	½	½
Drain Connection Type	FPT	FPT
Chilled Water Connection Size (in)	½	½
Chilled Water Connection Type	FPT	FPT
Min. Supply Air Grille Size (sq in/sq cm)	50/323	70/452
Min. Return Air Grille Size (sq in/sq cm)	200/1291	240/1549

[1] 'Z' indicates 230V. Add '-FC' for optional flow control; add '-L' for valve on the left relative to the blower side of the coil (right side is the default); add '#kW' for amount of optional electric heat in kilowatts.

[2] All dimensions ± 0.30 in. (8 mm).

Dimensions



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L-2562 Rev. 20120824

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Environmentally Responsible

Assembled in the USA

Dealer

ATV-HV Series Slim-Profile Air Handlers

Designed With Depth Constraints In Mind

ATV-HV chilled water air handlers were designed for applications where very little depth is available. Showcasing a unique vertical layout, these air handlers have the coil low and the blower above.

Featuring a slim profile, ATV-HV air handlers make previously unusable areas suitable for installation. With a depth of only 9.4 in. (240 mm), these units can be hidden in side areas instead of in places above or below, where most air handlers are installed. ATV-HV air handlers have a high-velocity blower with internal motor that keeps overall unit depth to a minimum, resulting in easier installation.

ATV-HV air handlers are available in two configurations: Low-profile (LP) and square (SQ). LP models have a reduced height for installations where height, as well as depth, is restricted. SQ models have a square blower assembly that allows 90° of blower rotation in the field.

ATV-HV air handlers are constructed with corrosion-resistant materials and have drain pans lined with an anti-slosh, anti-fungal foam. Exposed metal surfaces are insulated against secondary condensation. Options include a flow control valve that balances chilled water distribution throughout the system, and electric heat.

The ATV's slim-profile design is ideal for installation in walls and other areas where depth is limited.

Key Benefits

- Unique vertical design results in dramatically reduced depth
- Fits into walls and other tight spaces
- Exposed components are insulated against secondary condensation
- High-velocity (HV) blower with internal motor to reduce depth
- Low-profile models (ATV*HV-LP) have a reduced height for tight installation spaces
- Square models (ATV*HV-SQ) allow 90° of blower rotation in the field
- Electrical box can be remotely mounted up to 6 ft. (1.8 m)
- Drain pan has anti-slosh, anti-fungal foam lining
- Optional flow control automatically balances circulated water throughout the system
- Optional electric heat
- Optional Breathe Easy™ microparticle air filter

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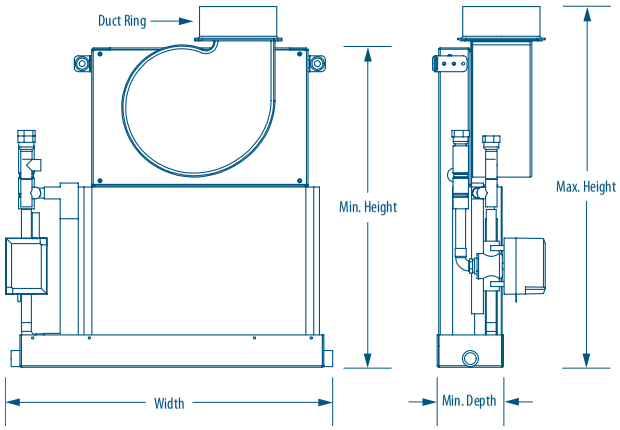
Specifications for ATV-HV Series Slim-Profile Air Handlers

Model [1]	ATV18HV-LP		ATV24HV-LP	
Nominal Capacity - Cool (BTU/h)	18000		24000	
Voltage @ 50/60Hz 1-Ph (V)	115	230	115	230
Full Load Amps (FLA) Cool (A)	2.3	1.15	2.3	1.64
Full Load Amps (FLA) Blower (A)	2.3	1.15	2.3	1.64
Optional Electric Heat (kW)	3		3	
Heater Amps (A)	26.1	13	26.1	13
Max. Circuit Breaker (A)	5		5	
Min. Circuit Ampacity (A)	3	2	3	
Water Flow (gpm/lpm)	4.5/17.1		6/22.8	
Air Flow (cfm/m3h)	485/825		709/1205	
External Static Pressure (inH20/Pa)	0.3/74.7		0.3/74.7	
Min. Height (in/mm) [2][3]	25.4/646		29.1/740	
Max. Height (in/mm) [2][3]	27.8/707		31.3/796	
Max. Width (in/mm) [2]	21.2/539		23.7/602	
Min. Depth (in/mm) [2]	6/153		7.7/196	
Max. Depth (in/mm)	8.9/227		10.4/265	TBD
Drain Connection Size (in)	½		½	
Drain Connection Type	FPT		FPT	
Chilled Water Connection Size (in)	½		½	
Chilled Water Connection Type	FPT		FPT	
Min. Supply Duct Size (in/mm)	7/178		8/204	
Min. Supply Air Grille Size (sq in/sq cm)	100/646		140/904	
Min. Return Air Grille Size (sq in/sq cm)	200/1291		240/1549	

[1] 'LP' indicates low-profile configuration; replace with 'SQ' for square configuration.
[2] All dimensions ± 0.30 in. (8 mm).
[3] Heights listed are for 'LP' configurations.

Dimensions



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L-2567 Rev. 20120824

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Environmentally Responsible

Assembled in the USA

Dealer

WhisperCool Technology

ATV-DC Series Slim-Profile Air Handlers

Designed With Depth Constraints In Mind

ATV-DC chilled water air handlers were designed for applications where very little depth is available. Showcasing a unique vertical layout, these air handlers have the coil low and the blower above.

Featuring a slim profile, ATV-DC air handlers make previously unusable areas suitable for installation. With a depth of only 9.4 in. (240 mm), these units can be hidden in side areas instead of in places above or below, where most air handlers are installed. ATV-DC air handlers have DC "WhisperCool' blowers that are ultra quiet yet strong enough to overcome high-static-pressure duct. The internal blower motor keeps overall unit depth to a minimum, resulting in easier installation.

ATV air handlers are available in two configurations: Low-profile (LP) and square (SQ). LP models have a reduced height for installations where height, as well as depth, is restricted. SQ models have a square blower assembly that allows 90° of blower rotation in the field.

ATV air handlers are constructed with corrosion-resistant materials and have drain pans lined with an anti-slosh, anti-fungal foam. Exposed metal surfaces are insulated against secondary condensation. Options include a flow control valve that balances chilled water distribution throughout the system, and electric heat.

Key Benefits

- DC "WhisperCool" blowers are extremely quiet yet powerful enough to overcome high-static-pressure duct
- Unique vertical design results in dramatically reduced depth
- Fits into walls and other tight spaces
- Low-profile models (ATV*DC-LP) have a reduced height for tight installation spaces
- Square models (ATV*DC-SQ) allow 90° of blower rotation in the field
- Exposed components are insulated against secondary condensation
- Electrical box can be remotely mounted up to 6 ft. (1.8 m)
- Optional flow control automatically balances circulated water throughout the system
- Optional electric heat

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Specifications for ATV-DC Series Slim-Profile Air Handlers

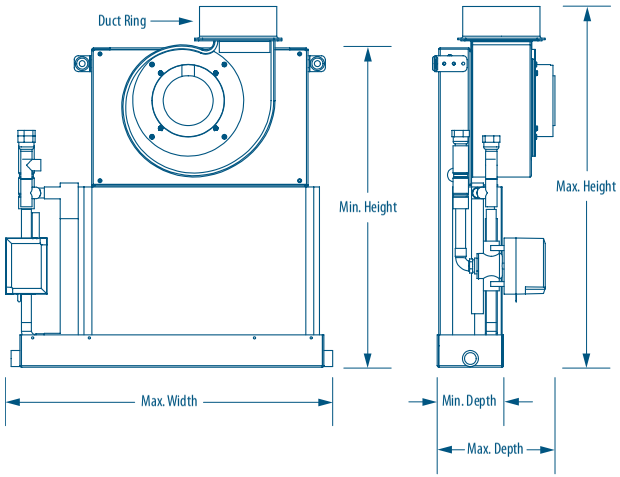
Model [1]	ATV6DC-LP	ATV9DC-LP	ATV12DC-LP	ATV18DC-LP	ATV24DC-LP	ATV36DC-LP
Nominal Capacity - Cool (BTU/h)	6000	9000	12000	18000	24000	36000
Voltage @ 50/60Hz 1-Ph (V)	230	230	230	230	230	230
Full Load Amps (FLA) Cool (A) [2]	1.4	1.4	3.2	3.9	3.9	3.9
Full Load Amps (FLA) Blower (A)	1.4	1.4	3.2	3.9	3.9	3.9
Optional Electric Heat (kW)	1	1.5	1.5	3	3	3
Heater Amps (A)	4.3	6.5	6.5	13	13	13
Max. Circuit Breaker (A)	10	5	5	5	15	5
Min. Circuit Ampacity (A)	7	2	4	3	13	5
Water Flow (gpm/lpm)	1.5/5.7	2.25/8.6	3/11.4	4.5/17.1	6/22.8	9/34.1
Air Flow (cfm/m3h)	290/493	290/493	421/716	548/932	670/1139	670/1139
External Static Pressure (inH2O/Pa)	0.3/74.7	0.3/74.7	2.1/522.9	1.4/348.6	0.3/74.7	0.3/74.7
Min. Height (in/mm) [3]	20.2/514	20.2/514	20.6/524	25.4/646	27.7/704	31.9/811
Max. Height (in/mm) [3]	22.9/582	22.9/582	24.1/613	27.9/709	29.9/760	34.7/882
Max. Width (in/mm) [3]	20.3/516	20.3/516	20.3/516	21.1/536	23.7/602	29.4/747
Min. Depth (in/mm) [3]	4.1/105	4.1/105	4.2/107	6/153	7.7/196	7.6/194
Max. Depth (in/mm) [3]	7.5/191	7.5/191	9.4/239	10.1/257	10.8/275	11.4/290
Drain Connection Size (in)	½	½	½	½	½	½
Drain Connection Type	FPT	FPT	FPT	FPT	FPT	FPT
Chilled Water Connection Size (in)	½	½	½	½	½	1
Chilled Water Connection Type	FPT	FPT	FPT	FPT	FPT	FPT
Min. Supply Duct Size (in/mm)	5/127	6/153	6/153	7/178	8/204	8/204
Min. Supply Air Grille Size (sq in/sq cm)	35/226	49/317	70/452	100/646	140/904	196/1265
Min. Return Air Grille Size (sq in/sq cm)	70/452	98/633	130/839	200/1291	240/1549	360/2323

[1] 'Z' indicates 230V. Add '-FC' for optional flow control; add '-L' for valve on the left relative to the blower side of the coil (right side is the default); add '#kW' for amount of optional electric heat in kilowatts.

[2] Blower amps will be reduced at lower speed/cfm or higher static pressure. Amps listed are at free air.

[3] All dimensions ± 0.30 in. (8 mm).

Dimensions



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NEW

ATV "4-Pipe" Series Slim-Profile Air Handlers

Narrow Depth With Separate Boiler Connections

The ATV is a chilled water air handler designed for applications where very little depth is available. In the “4-pipe” configuration there are two separate sets of valves and heat exchangers for cooling and for heating. Two pipes connect to the chiller system to provide cooling, and two pipes connect to an auxiliary heat source, such as a boiler, to provide heating.

Tall and slim, ATV air handlers make previously unusable areas suitable for blower installation. Showcasing a unique vertical layout, the ATV series has the coil low and the blower above. Because of its minimal depth, it can be hidden in side areas instead of in places above or below, where most air handlers go.

Designed for ducted applications, the ATV series is equipped with high-velocity (HV) blowers with internal motors to reduce depth for more flexibility during installation. They are also available with brushless “WhisperCool” DC blowers that are extremely quiet yet can overcome significant static pressure in the ducting system.

ATV air handlers are constructed of corrosion-resistant materials and are fully insulated against secondary condensation. The drain pan has an anti-slosh, anti-fungal foam lining. An optional flow control is highly recommended to help distribute the flow of chilled water more efficiently.

The ATV's slim-profile design is ideal for installation in walls and other areas where depth is limited.

Key Benefits

- Unique vertical design results in dramatically reduced depth
- Fits into walls and other tight spaces
- Dedicated circuits for chilled water cooling and heating provided by an auxiliary heat source such as a boiler
- Exposed components are insulated against secondary condensation
- High-velocity (HV) blower with internal motor to reduce depth
- Optional DC "WhisperCool" blowers are extremely quiet yet powerful enough to overcome high-static-pressure duct
- Drain pan has anti-slosh, anti-fungal foam lining
- Electrical box can be remotely mounted up to 6 ft. (1.8 m)
- Optional flow control automatically balances circulated water throughout the system
- Optional Breathe Easy™ microparticle air filter

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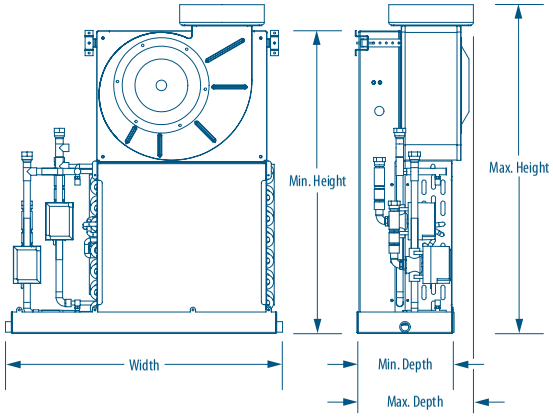
Specifications for ATV "4-Pipe" Series Slim-Profile Air Handlers

Model	ATV9HV-4P-LP		ATV12HV-4P-LP		ATV18HV-4P-LP		ATV24HV-4P-LP	
Nominal Capacity - Cool (BTU/h)	9000		12000		18000		24000	
Voltage @ 50/60Hz 1-Ph (V)	115	230	115	230	115	230	115	230
Full Load Amps (FLA) Cool (A)	1.14	0.61	1.61	0.78	2.52	1.18	3.4	1.64
Full Load Amps (FLA) Blower (A)	1.4	0.7	1.4	0.7	2.2	1	3.5	1
Optional Electric Heat (kW)	1		1		1.5		1.5	
Heater Amps (A)	8.7	4.3	8.7	4.3	13	6.5	13	6.5
Max. Circuit Breaker (A)	5		5		5		5	
Min. Circuit Ampacity (A)	2	1	2	1	3	2	4	3
Water Flow (gpm/lpm)	2.25/8.6		3/11.4		4.5/17.1		6/22.8	
Air Flow (cfm/m3h)	280/476		400/680		600/1020		650/1105	
External Static Pressure (inH2O/Pa)	0.75/186.8		0.75/186.8		0.75/186.8		0.75/186.8	
Min. Height (in/mm) [1]	22.3/567		22.3/567		26.2/666		29.4/747	
Max. Height (in/mm) [1]	24.3/618		24.3/618		28.2/717		31.4/798	
Max. Width (in/mm) [1]	24.1/613		24.1/613		24.9/633		26.3/669	
Min. Depth (in/mm) [1]	6.4/163		6.5/166		7.6/194		9.4/239	
Max. Depth (in/mm) [1]	7.6/194		8.3/211		8.9/227		11.2/285	
Chilled Water Connection Size (in)	½		½		½		½	
Chilled Water Connection Type	FPT		FPT		FPT		FPT	
Min. Supply Duct Size (in/mm)	6/153		6/153		7/178		8/204	
Min. Supply Air Grille Size (sq in/sq cm)	49/317		70/452		100/646		140/904	
Min. Return Air Grille Size (sq in/sq cm)	98/633		130/839		200/1291		240/1549	

[1] All dimensions ± 0.30 in. (8 mm).

Dimensions



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L-3017 Rev. 20130215

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Environmentally Responsible

Assembled in the USA

Dealer

AT-HV-MU Series Fresh Air Make-Up Air Handlers

Keep Air Inside the Vessel From Going Stale

The AT series of fresh-air make-up air handlers (AT-HV-MU) for chilled water systems duct in outside air, cool and dehumidify it, then re-heat it to room temperature and duct it to various interior spaces. Typically, crew cabins and other spaces two or more levels below deck will benefit from the use of these systems.

AT-HV-MU air handlers consist of a water coil, valve, electric heater, and high-velocity (HV) blower mounted on a condensate pan/chassis with cushioned mounts to reduce noise and vibration.

The specially-designed water coil cools and dehumdifies outside air in one pass. The coil, as well as the blower and all exposed sheet metal components, is coated to resist corrosion. A motorized three-way bypass valve controls the flow of circulated water through the coil The HV blower has a high-efficiency internal motor, and can be rotated as required for installation. Ultra-quiet DC “WhisperCool” blowers are available. An electric heater with redundant over-temperature protection reheats the cooled air to room temperature.

The sloped “positive-flow” condensate pan reduces standing water and is lined with anti-fungal and anti-slosh foam. The blower, condensate pan, and other exposed areas are insulated against secondary condensation. An optional modulating loop-water flow control regulates the water through the unit to ensure proper water distribution to all air handlers.

Key Benefits

- Compact design
- Corrosion-resistant coating on evaporator coil, blower, and drain pan
- Patented
- Drain pan has anti-slosh, anti-fungal foam lining
- High-velocity (HV) fully-insulated blowers are rotatable
- Integrated three-way bypass valve with easy-change power head
- Electric heat with two-stage electric heat overload
- Heater assembly accessible from the top or side
- Large coil shroud volume for optimal performance
- Brass hose barb loop-water connections
- Electrical box can be remotely mounted up to 6 ft. (1.8 m)
- Remote air bleeder on 6 ft. (1.8 m) of flexible tubing with ball valve
- Built-in flow control balances chilled water distribution

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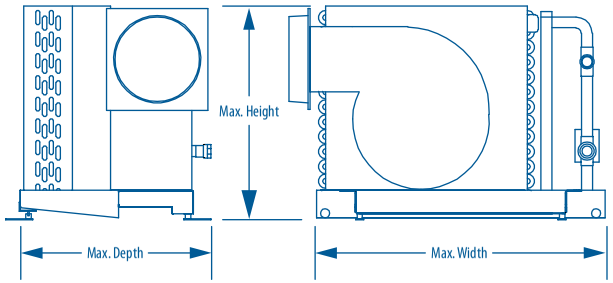
Specifications for AT-HV-MU Series Fresh Air Make-Up Air Handlers

Model	AT18HVZ-1.5KW-MU	AT24HVZ-2X1KW-MU	AT36HVZ-FC-2X1.5KW-MU
Nominal Capacity (BTU/h)	18000	24000	36000
Voltage @ 50/60Hz 1-Ph (V) [1]	230	230	230
Full Load Amps (FLA) Cool (A)	0.9	0.7	1.6
Full Load Amps (FLA) Heat (A)	7.5	9.4	14.7
Full Load Amps (FLA) Blower (A) [2]	0.9	0.7	1.6
Optional Electric Heat (kW)	1.5	1	1.5
Max. Circuit Breaker (A)	10	10	20
Min. Circuit Ampacity (A)	8	10	16
Water Flow (gpm/lpm)	4.5/17.1	6/22.8	9/34.1
Air Flow (cfm/m3h)	174/296	276/469	550/935
External Static Pressure (inH2O/Pa)	0.72/179.3	0.36/89.7	0.75/186.8
Max. Height (in/mm) [3]	15/381	16.6/422	19.5/496
Max. Width (in/mm) [3]	20.3/516	22.6/575	26.6/676
Max. Depth (in/mm) [3]	12.3/313	15.3/389	18/458
Drain Connection Size (in)	½	½	½
Drain Connection Type	FPT	FPT	FPT
Chilled Water Connection Size (in)	½	½	1
Chilled Water Connection Type	FPT	FPT	FPT
Min. Supply Duct Size (in/mm)	5/127	6/153	8/204
Min. Return Air Grille Size (sq in/sq cm)	100/646	140/904	220/1420
Net Weight (lbs/kg) [4]	37/16.8	44/19.1	63.75/28.1
Gross Weight (lbs/kg) [4]	41/18.6	58/26.4	81.25/36.9

[1] Verify voltage! Units with SCR-based controls are designed for either 208VAC or 230VAC. Add "208" to the end of the model number for 208VAC units.
[2] Electrical and blower data is based on 50Hz performance.
[3] All dimensions ± 0.30 in. (8 mm).
[4] All weights ± 10%

Dimensions



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L-2404 Rev. 20130607

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Environmentally Responsible

Assembled in the USA

Dealer

Full-Color Touch Screen

Smart Touch Cabin Control

Intuitive Use & Customization at Your Fingertips

Introducing Smart Touch, the easiest to use, most intuitive marine cabin control in the world.

Highly customizable, Smart Touch lets you choose whether the home screen displays a lot of information or just a basic temperature control. Intuitive submenus step the user through full system access. Even the color palette displayed on each control can be chosen by the user.

When not in active mode the control can display a standard display image, customizable text such as the name of the boat, or a blank screen. A future option will enable displaying a customizable image such as a logo.

Smart Touch displays a full text description of the system fault and troubleshooting procedures — no more cryptic codes. An fault history is maintained, including the date and time of each occurrence.

The Test/Commission mode uses interactive screens to guide the user through the initial startup process and is used for interactive system testing and diagnostics. Service alerts display on screen.

Non-volatile memory ensures the control maintains its configuration settings, schedule, and fault history indefinitely. An internal battery maintains the date and time when switching between power sources.

Smart Touch features the first-ever programmable scheduler for marine air conditioning, and includes CAN bus networking capability. In addition, key portions of the user manual are stored as well as a listing of Dometic service dealers.

Smart Touch works with Marine Air's Passport I/O microprocessor control system. An optional wireless upgrade will be available in the future as well as a smart phone application.

Smart Touch features a full-color interactive display.

Convenient smart phone links to online content such as manuals and service dealer locator.

Modern, stylish Vimar Eikon bezel complements many boat interiors.

Key Benefits

- Highly customizable displays enable personal preferences
- Intuitive icons and menus for easy use
- Interactive screen leads you through start-up and troubleshooting
- Programmable scheduler lets you set start-up and shut-down times or temperature changes
- Built-in help for certain features
- Faults and service alerts display on screen
- CAN Bus compatible
- Smart Touch display mounting plate accommodates the Vimar Eikon and Eikon Evo bezels (sold seprately)
- Optional wireless upgrade and smart phone app available in 2014

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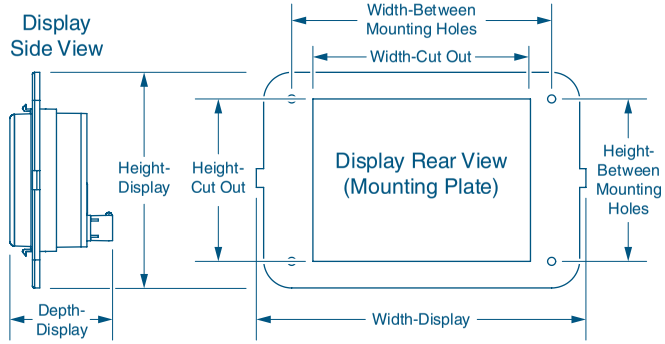
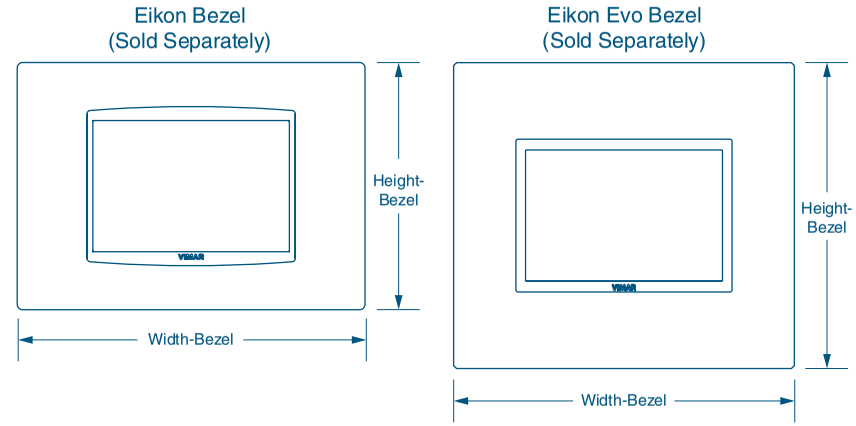
Specifications for Smart Touch Cabin Control

Model	Height-Display (in/mm)	Width-Display (in/mm)	Depth-Display (in/mm)	Height-Cut Out (in/mm)	Width-Cut Out (in/mm)	Height-Between Mounting Holes (in/mm)	Width-Between Mounting Holes (in/mm)	Height-Eikon Bezel (in/mm)	Width-Eikon Bezel (in/mm)	Height-Eikon Evo Bezel (in/mm)	Width-Eikon Evo Bezel (in/mm)
Smart Touch Display	2.874/73	4.309/110	1.368/35	2.165/55	2.90/74	2.165/55	3.465/88	3.31/84	4.72/120	4.15/106	4.62/118

Dimensions





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L-3231 Rev. 20140110

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Environmentally Responsible

Dealer

Now Supports Vimar Eikon

Elite™ Cabin Control

Elite Control Keypad/Display

Elite keypad/display shown with Vimar® Eikon bezel (sold separately)

The Elite™ keypad/display provides easy-to-use climate control in an attractive package. It works with Marine Air's Passport I/O microprocessor-based system for the precise control and monitoring of marine air conditioning systems. The Elite keypad/display operates at 115 or 230 volts, each operable at 50 or 60 cycles.

The Elite features raised buttons for easy access and control. The Mode button is used to scroll through the four modes of operation, simplifying programming. Decorative snap-on Vimar® bezels (sold separately) are available in a variety of colors and materials to match your vessel's interior.

The Elite keypad/display is flash programmable, which allows for future software upgrades without the need to replace the circuit board. A ground shield protects against static interference and RF noise, and the circuit board is conformally coated to provide high resistance to external damage or corrosion. A display cable with modular jacks connects the panel to the system controller. Non-volatile memory stores all user-selectable parameters indefinitely during operation and through any power-failure situations.

The Passport® I/O circuit board utilizes state-of-the art SMT technology and has an optional integrated CAN-bus network adapter that provides ship-wide network monitoring of multiple DX systems and air handlers. The adapter adheres to CAN-bus Standard 2.0B and is fully ISO compliant. It is available in two high-level CAN-bus communication protocols to support connection to several popular helm and cabin touchscreen control systems.

Elite keypad/display shown with Vimar® Idea bezel in gold (sold separately).

Key Benefits

- Automatic humidity control reduces moisture when the boat is unattended
- Cool-only, heat-only, dehumidy, and automatic mode selection
- New optional electric-heat relay
- Optional CAN bus adapter puts cabin control on the ship-wide network
- Displays Fahrenheit and Celsius
- Automatic or manual fan-speed selection
- Cycle fan with compressor or continuous fan operation
- Cycle pump with compressor or continuous pump operation
- Compressor time delay staging for multiple unit applications
- Dimmable display
- Controls shaded pole and split capacitor fan motors
- Compressor fail-safe protection
- Programmable de-icing cycle
- Built-in air sensor
- Optional remote air sensor
- Available with popular Vimar bezels, including the Eikon (sold separately)

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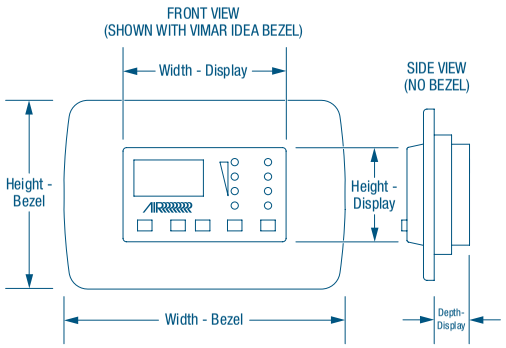
Specifications for Elite™ Cabin Control

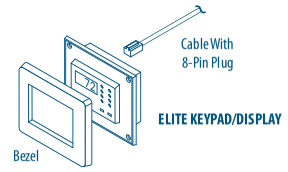
Model	ELITE (VIMAR IDEA BEZEL)	ELITE (VIMAR EIKON BEZEL)
Voltage (V)	115/230	115/230
Cycle (Hz)	50/60	50/60
Compressor Output (V) [1][2]	40	40
R.V. Output (V) [3]	0.25	0.25
Fan Output (V)	6	6
Heater Output (V)	30/20	30/20
Pump Output (hp/kW) [2]	¼ /0.2/½ /0.4	¼ /0.2/½ /0.4
Set Point Temp. Range (°F/°C)	65 - 85/18.4 - 29.5	65 - 85/18.4 - 29.5
Display Temp. Range (°F/°C)	5 - 150/-15 - 65.6	5 - 150/-15 - 65.6
Air Sensor Temp. Range (°F/°C)	5 - 150/-15 - 65.6	5 - 150/-15 - 65.6
Sensor Accuracy (°F/°C)	2/77/-16.7/25	2/77/-16.7/25
Water Inlet Sensor Cable Length (AH-Elite) (ft/m)	7/3	7/3
Display Cable Length (ft/m - ft/m) [4]	10/3.1 - 75/22.9	10/3.1 - 75/22.9
Optional Alternate/Remote Air Cable Length (ft/m) [4]	7 - 60/2.2 - 18.3	7 - 60/2.2 - 18.3
Optional Outside Air Sensor Cable Length (ft/m) [4]	7 - 50/2.2 - 15.3	7 - 50/2.2 - 15.3
Optional Pump Sentry Cable Length (ft/m)	7 - 60/2.2 - 18.3	7 - 60/2.2 - 18.3
Water Inlet Sensor Cable Length (AH-Elite) (ft/m)	7 - 60/3 - 19	7 - 60/3 - 19
Height-Display (in/mm)	2.96/76	2.88/74
Width-Display (in/mm)	4.41/113	4.45/114
Depth-Display (in/mm)	1.08/28	1.05/27
Panel Cut-Out Height (in/mm)	2.19/56	1.88/48
Panel Cut-Out Width (in/mm)	3.31/85	2.75/70
Height-Bezel (in/mm) [5]	2.96/76	3.31/85
Width-Bezel (in/mm)	4.41/113	4.69/120

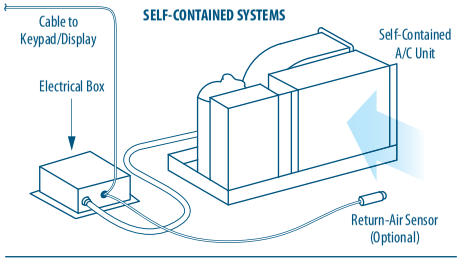
[1] Maximum loads should not exceed 85% of listed output ratings.
[2] Does not apply to AH-Elite.
[3] Used as water valve output in AH-Elite mode.
[4] Maximum length is 75 ft. (23 m).
[5] Bezels sold separately; dimensions may vary depending on style.

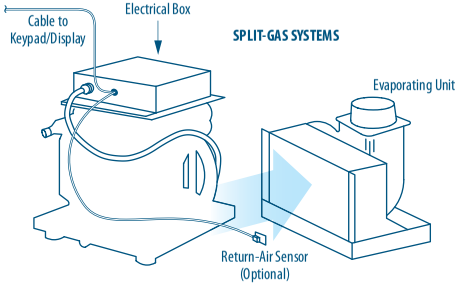
Dimensions

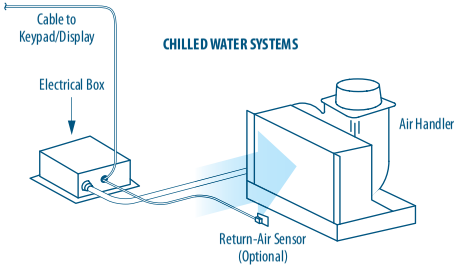


Installation









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L-2237 Rev. 20131213

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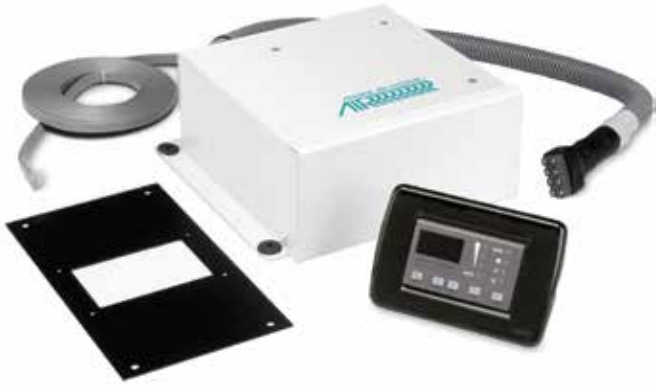
Environmentally Responsible

Dealer

Upgrade Your Old Cabin Control

Elite™ Cabin Control Retrofit Kits

Upgrade Your Old Marine Air Control With the Elite™



Left to right: Vertical mounting plate (available as horizontal), Passport I/O electrical box with wiring harness, and Elite keypad/display with Vimar® bezel

The Elite™ Control is a microprocessor-based controller designed for the precise monitoring of marine air conditioning systems, and is now available in retrofit kits for both direct expansion and chilled water applications. The Elite Retrofit Kit is used for direct expansion (DX) self-contained units and evaporators, while the AH-Elite Retrofit Kit is used for chilled water air handlers. All kits utilize the Passport® I/O circuit board and either DX or CW software. The control operates at 115 or 230VAC, 50 or 60Hz.

Elite Retrofit Kits have everything necessary to upgrade an older Marine Air control, including the the MCP 3-knob, Passport II, ECU, and ECU-Maxx controls. Specify either self-contained (SC) or split central system (CS) when ordering. The AH-Elite Retrofit Kit will replace the older AH-Passport display.

Each kit contains the Elite keypad/display, a Vimar® Black Poly Rondo bezel, the Passport I/O circuit board mounted in an electrical box, alternate air sensor and display cables, wiring harness, operation manual, quick reference card and mounting plate. Specify either a horizontal or vertical mounting plate when replacing an ECU or a 3-knob mechanical control.

The entire assembly is grounded and protected against static interference and RF noise. The circuit board is conformally coated to provide high resistance to external damage or corrosion. Internal self-diagnostic programs provide complete electronic checks of all lights, sensors, keys and circuits. M.O.V.s (metal oxide varistors) provide component and board protection. Non-volatile memory stores all user-selectable parameters indefinitely during operation or any power failure situation.

The Elite Control meets or exceeds applicable ABYC, U.S. Coast Guard Regulations and CE Directives.

Key Benefits

- Complete kit allows the replacement of your old cabin control with the advanced, easy-to-use Elite keypad/display
- Includes electric box with Passport I/O microprocessor, Elite keypad/display, Vimar® bezel, horizontal and vertical mounting plates, and connecting cables
- Polarized plug for easy connection to existing self-contained unit
- Convenient phone-type modular jack plugs into keypad/display
- Mounting plates for replacing horizontal or vertical MCP 3-knob control
- Automatic humidity control reduces moisture when the boat is unattended
- Cool-only, heat-only, dehumidy, and automatic mode selection
- New optional electric-heat relay
- Optional CAN bus adapter puts cabin control on the ship-wide network
- Displays Fahrenheit and Celsius
- Automatic or manual fan-speed selection
- Cycle fan with compressor or continuous fan operation
- Cycle pump with compressor or continuous pump operation
- Dimmable display
- Controls shaded pole and split capacitor fan motors
- Compressor fail-safe protection

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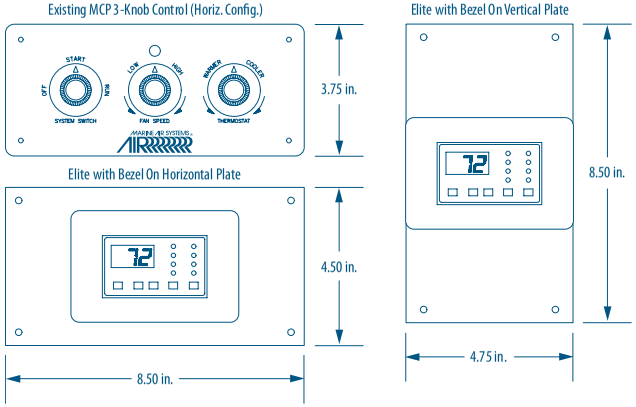
Specifications for Elite Retrofit Kits

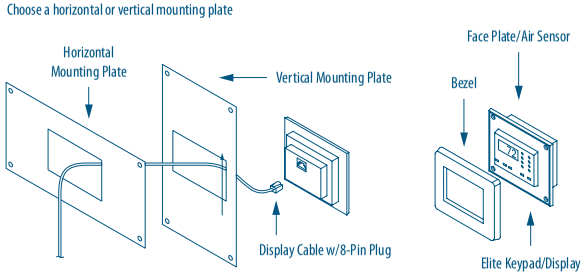
Model [1]	Retro (SC/CS/AH) Elite (HRZ/VRT)
Elite Display Dimensions (H x W x D)	2.96 x 4.41 x 1.08 in. (75 x 112 x 27 mm)
Bezel Dimensions (H x W) [2]	3.25 x 4.85 in. (83 x 123 mm)
Mounting Plate Dimensions	Refer to Dimensions Drawing
Display Cable Length (ft/m)	Self-Contained System: 15/4.6 Split System: 30/9.1 Chilled Water System: 15/4.6
Water Inlet Sensor Cable Length (ft/m)	7/2.1
Other Cables Available [3]	Most Cables Available in 5 ft. (1.5 m) Increments
Display Cable Length (ft/m)	10-75/3.0-22.9
Alternate/Remote Cable Length (ft/m) [4]	7-60/2.1-18.3
Outside Air Sensor Cable Length (ft/m)	7-50/2.1-15.2
Pump Sentry Cable Length (ft/m)	7-60/2.1-18.3
Water Inlet Sensor Cable Length (ft/m)	7-60/2.1-18.3

[1] Specify SC for self-contained, CS for central system, or AH for a chilled water air handler. Specify HRZ for horizontal or VRT for vertical when replacing MCP 3-knob or ECU controls only.
[2] Retrofit kits include a black poly Rondo-type bezel (#335441). Other Idea bezels from Vimar are available in Rondo or Classica styles and are sold separately. Dimensions may vary slightly depending on the style.
[3] Maximum length for display, air sensor, and water inlet sensor cables is 75 ft. (23 m).
[4] Air sensor cables longer than 7 ft. (2.1 m) require a remote air sensor card.

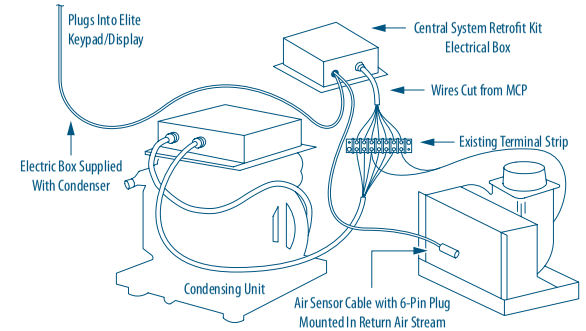
Dimensions



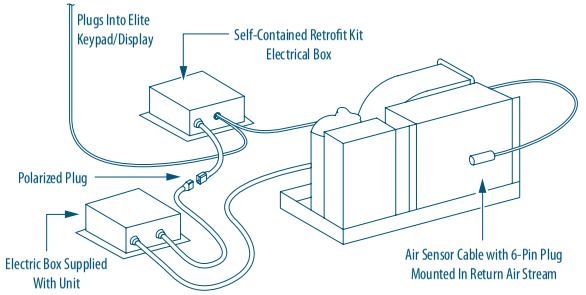
Installation



SPLIT-GAS SYSTEMS


Plugs Into Elite Keypad/Display
Central System Retrofit Kit Electrical Box
Wires Cut from MCP
Existing Terminal Strip
Electric Box Supplied With Condenser
Condensing Unit
Air Sensor Cable with 6-Pin Plug Mounted In Return Air Stream

SELF-CONTAINED SYSTEMS


Plugs Into Elite Keypad/Display
Self-Contained Retrofit Kit Electrical Box
Polarized Plug
Electric Box Supplied With Unit
Air Sensor Cable with 6-Pin Plug Mounted In Return Air Stream

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L-2240 Rev. 20131213

Specifications and availability subject to change without notice.

Dealer

New Compact Design

Passport I/O Cabin Control

Easy-To-Use Keypad/Display for Marine Air Systems

The Passport I/O Environmental Control Unit is a microprocessor based controller, designed for the precise control and monitoring of direct expansion and chilled water boat air conditioning systems from Marine Air. The control is dual voltage, operating at both 115 and 230 Volts, 50/60 Hz. The display is available in both black and white. In chilled water air handlers, the control is referred to as AH-Passport I/O.

The assembly has a ground shield to protect against static interference and RF noise. The circuit board is conformally coated to provide high resistance to external damage or corrosion.

A display cable with gold plated phone-type modular jacks connects the panel to the system controller. An optional air sensor cable is connected to the circuit board in the same manner. Non-volatile memory stores all user-selectable parameters indefinitely during operation or any power failure situations.

Internal self-diagnostic programs provide complete electronic checks of all lights, sensors, keys and circuits. Fused circuits and M.O.V.s (metal oxide varistors) provide component and board protection.

The Passport I/O control meets or exceeds applicable ABYC, U.S. Coast Guard Regulations and CE Directives.

Key Benefits

- Automatic humidity control reduces moisture when the boat is unattended
- Cool-only, heat-only, dehumidy, and automatic mode selection
- New optional electric-heat relay
- Automatic or manual fan-speed selection
- Cycle fan with compressor or continuous fan operation
- Calibration of fan-speed settings and temp display for precise control
- Controls shaded pole and split capacitor fan motors
- Compressor fail-safe protection
- Programmable de-icing cycle
- Built-in air sensor
- Optional remote air sensor
- Dimmable display
- Low voltage for optimum safety

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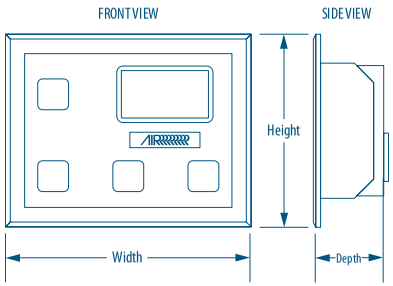
Specifications for Passport I/O Cabin Control

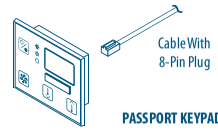
Model	Passport Compact
Voltage (V)	115/230
Cycle (Hz)	50/60
Compressor Output (V) [1][2]	40
R.V. Output (V) [3]	0.25
Fan Output (V)	6
Heater Output (V)	30/20
Pump Output [2]	¼ /½
Set Point Temp. Range (°F/°C)	65 - 85/18.4 - 29.5
Display Temp. Range (°F/°C)	5 - 150/-15 - 65.6
Air Sensor Temp. Range (°F/°C)	5 - 150/-15 - 65.6
Sensor Accuracy (°F/°C)	2/77/-16.7/25
Water Inlet Sensor Cable Length (AH-Elite) (ft/m)	7/3
Display Cable Length (ft/m - ft/m) [4]	10/3.1 - 75/22.9
Optional Alternate/Remote Air Cable Length (ft/m) [4]	7 - 60/2.2 - 18.3
Optional Outside Air Sensor Cable Length (ft/m) [4]	7 - 50/2.2 - 15.3
Optional Pump Sentry Cable Length (ft/m)	7 - 60/2.2 - 18.3
Water Inlet Sensor Cable Length (AH-Elite) (ft/m)	7 - 60/3 - 19
Height-Display (in/mm)	2.5/64
Width-Display (in/mm)	3.19/82
Depth-Display (in/mm)	0.94/24
Panel Cut-Out Height (in/mm)	1.875/48
Panel Cut-Out Width (in/mm)	2.5/64

[1] Maximum loads should not exceed 85% of listed output ratings.
[2] Does not apply to AH-Passport I/O.
[3] Used as water valve output in AH-Passport I/O mode.
[4] Maximum length is 75 ft. (23 m).
[5] Bezels sold separately; dimensions may vary depending on style.

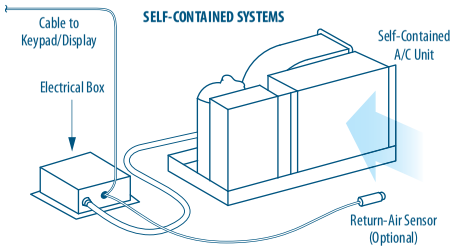
Dimensions

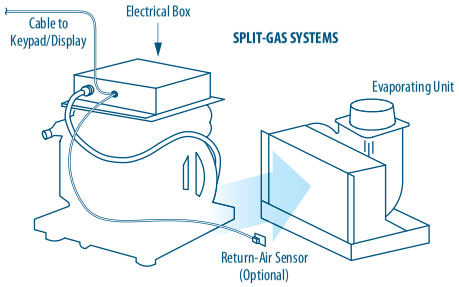


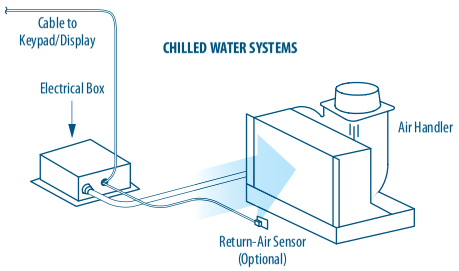
Installation



PASSPORT KEYPAD/DISPLAY







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L-2630 Rev. 20120824

Specifications and availability subject to change without notice.

Environmentally Responsible

Dealer

NEW

Smart Touch Chiller Control

Intuitive High-Resolution Display

Easy Chiller Management

Managing a multi-stage chiller system has never been easier. The Smart Touch Chiller Control is intuitive to use and provides clear indications of current status, operational trends, animated real-time monitoring of the refrigeration circuit, and more.

The high resolution display can be mounted in the chiller system's electrical box or at a convenient remote location, and is available in three screen sizes: 7 in. (178 mm), 10 in. (254 mm), or 13 in. (331 mm).

Innovative Features

- Increased analog inputs – Monitor important conditions such as water loop glycol level, and utilize dynamic superheat control for improved performance.
- Condenser protection – Monitor differential pressure to protect from catastrophic failures by adjusting the speed of the seawater pump to maintain constant pressure or adjust to proper pressure and receive an alert about a potential problem.
- Alarm messaging – Receive text or email message in real time if a fault occurs (network required).
- Load banking – Works with your generator to keep it running at a healthy and efficient 70-80% operational load by turning on additional stages as required. Eliminates the need for a separate load bank.
- Photographic confirmation – Future integration with room controls that will allow the user to monitor room A/C performance.
- Data logger – Download Alarm Faults and Historical Trend Data onto a USB for analysis.

The Smart Touch Chiller Control works with any Cruisair or Marine Air chiller and can be retrofit to replace an existing Dometic Digital Control (DDC) or Tempered Water Logic Control (TWLC).

Quickly set chill water temperature setpoint and monitor water temperature.

Monitor the performance of the electronic expansion valve.

Review historical trend data, and much more.

Key Benefits

- High-resolution display
- Intuitive touch-screen operation
- Available in three screen sizes
- Networks to ship management controls via Modbus, CAN Bus, Ethernet, or BACnet
- Remote access through smart phone or computer via internet
- Increased analog inputs for detailed system monitoring
- Alarm messaging via text or email
- Load banking feature eliminates the need for a separate load bank
- Tracks operational trends of system for precise preventive maintenance
- For new chiller systems or replace Dometic Marine DDCs and TWLCs

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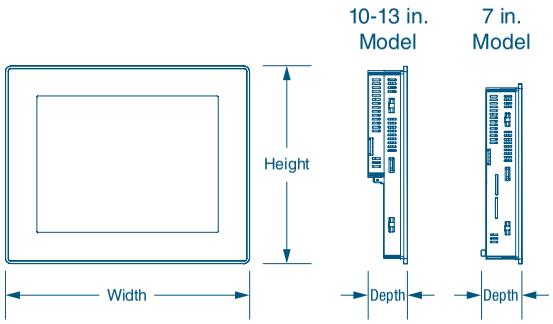
Dimensions for Optional Remote Smart Touch Display

Model	13 in. Display	10 in. Display	7 in. Display
Height (in/mm)	10.5/267	9.13/232	5.79/147
Width (in/mm)	13.27/337	11.30/287	7.36/187
Depth (in/mm)	1.65/42	1.65/42	1.77/45
Cutout Height (in/mm)	10.1/256	8.70/221	5.35/136
Cutout Width (in/mm)	12.83/326	10.87/276	6.93/176

Dimensions



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L-3292 Rev. 20140117

Specifications and availability subject to change without notice.

Environmentally Responsible

Assembled in the USA

Dealer

Chilled Water Master Controller

For Precise Staged Chiller Monitoring & Coordination

The Chilled Water Master Controller (CWMC) is a microprocessor-based controller designed for the precise monitoring and coordination of Digital Diagnostic Controllers (DDCs) for multiple chilled water systems on a boat. The control unit provides central control for up to six chillers via interfaces with the individual DDC* on each chiller. It controls all of the heating and cooling functions for each chiller, as well as operation of the seawater and chilled water pumps. It optimizes compressor operation by automatically changing the lead compressor to evenly distribute run time.

The two-line lit LCD display provides a scrolling read-out of system status including inlet and outlet water temperature of each stage, mixed outlet water temperature of the system, compressor run times, and diagnostic faults including refrigerant high and low pressure, flow switch, low voltage, freeze warning, and high water temperature limit. It also interfaces with a PC via a serial port permitting remote control and monitoring. The PC software also permits the system to be programmed in several different languages. Note that a PC is optional—not required—and the software is available on request.

The entire assembly is grounded and protected against static interference and RF noise. The circuit board is conformally coated to provide high resistance to external damage or corrosion.

A display cable with phone-type modular jacks connects the display to the circuit board. The circuit board has two display jacks. One jack is used for the display local to the chiller the second jack allows a second display to be remotely installed on the bridge or elsewhere. Non-volatile memory stores all user-selectable parameters indefinitely during operation or any power failure situations.

Internal self-diagnostic programs provide complete electronic checks of all lights, sensors, keys, and circuits. The CWMC controller meets or exceeds applicable ABYC, U.S. Coast Guard Regulations and CE Directives.

The CWMC keypad/ display features a two-line LCD and provides critical system information including diagnostic faults.

Key Benefits

- Provides central control for chillers with up to six stages
- Optimizes compressor operation
- Displays water temperatures, compressor run times, diagnostic faults, and more
- Interfaces with a PC via serial port for remote control and monitoring (PC sold separately)
- Circuit board is coated for high resistance to damage and corrosion
- Grounded and protected against static interference and RF noise
- Meets or exceeds applicable ABYC, US Coast Guard regulations, and CE directives

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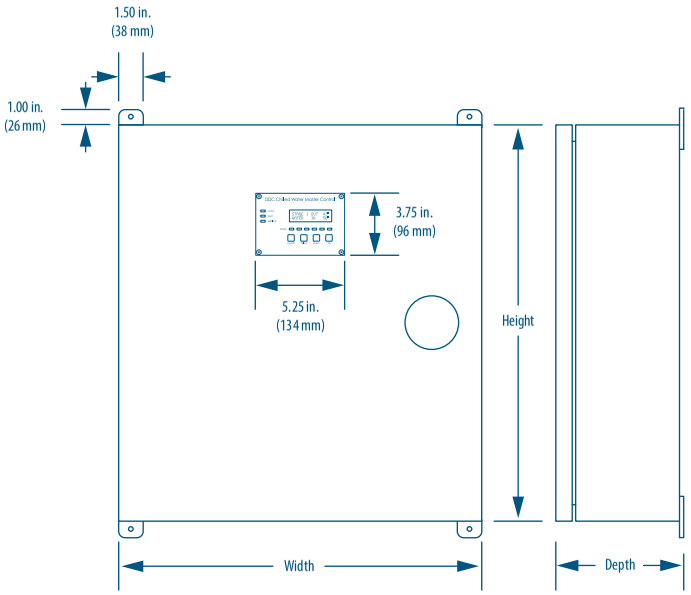
Specifications for Multi-Stage Chiller Control Box

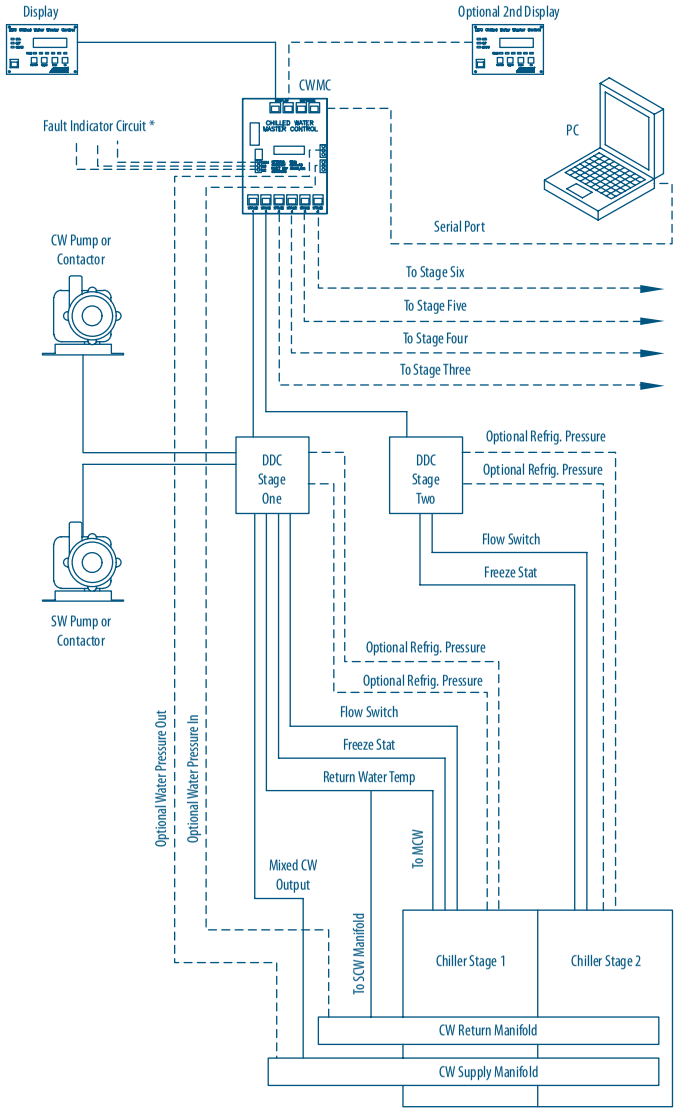
No. of Stages [1]	Width (in/mm)	Height (in/mm)	Depth (in/mm)
2 to 3	22.0/560	24.0/610	7.75/197
4	30.0/760	24.0/610	7.75/197
5	35.0/890	24.0/610	7.75/197

[1] For six-stage electrical box dimensions, please contact a Dometic sales representative at 954-973-2477.

Dimensions



Installation



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L-2133 Rev. 20120824

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Environmentally Responsible

Assembled in the USA

Dealer

Tempered Water Logic Control

For Precise Staged Chiller Monitoring & Coordination

The TWLC (Tempered Water Logic Control) is an advanced microprocessor chiller control specifically designed for marine circulated water systems. The TWLC system maximizes system performance, protects the chillers with advanced fault protection monitoring and shut-down routines, and has easy menu-driven operation supplying the user with important system information.

System redundancy and easy field repair were the priorities when the TWLC was developed. Each chiller in a TWLC system has a dedicated power/logic board, and the boards are networked together to form an integrated system (automatically controlling up to 6 chillers). This design means that a single board or network failure will not shut down the entire system. The P/L board has board-mounted LEDs to help with troubleshooting, replaceable EPROM for software upgrades, and plug-in terminal strips and RJ-12 jacks which allow for quick field installation.

Interaction with the system is through the TWLC keypad/display. A simple 4-button keypad is used to change operation mode and to navigate through the menus to view and change system parameters. A backlit LCD display supplies easy to read information about the system, including water temperatures, operation mode, which chillers are running, and other detailed information. Three small LEDs on the keypad clearly indicate Cool or Heat modes, and faults. An alarm buzzer on the keypad can also signal a fault. Additional TWLC keypads can be installed to allow remote system access.

Set up and operation of the TWLC is fully automatic. It senses how many units are connected and programs the temperature staging and unit rotation of the units to pre-programmed parameters. The TWLC board has non-volatile memory so settings and recorded information are not lost even if power is interrupted. The large memory capacity allows the TWLC to record run time of the compressors and pumps, and store the fault history of each unit.

The system monitors all the inputs and will display 12 different faults based on the information received. Each fault has a specific routine that protects the unit while helping to prevent nuisance faults. Some will generate a sustained shutdown, which must be reset from the TWLC keypad.

If a fault is sensed, the fault LED on the TWLC keypad will light (and the buzzer will sound, if activated) and the specific fault will be displayed on the LCD screen. The fault signal output on the P/L boards will also be powered.

Another feature of the TWLC is that it can be connected to an on-board computer or modem to allow full remote access of the system. Custom software emulates the TWLC on the computer screen and navigation through the menus is identical to the TWLC keypad/display. If a land phone line is available, a modem can be connected and the system can be viewed and operated remotely, allowing a knowledgeable service agent to troubleshoot the system anywhere in the world.

Key Benefits

- Provides central control for chillers with up to six stages
- Optimizes compressor operation
- Displays water temperatures, compressor run times, diagnostic faults, and more
- Interfaces with a PC via serial port for remote control and monitoring (PC sold separately)
- Keypad/display has four-button and four-line LCD
- Circuit breakers for compressors and pumps
- Records and logs faults and run times
- Optional current transducers to monitor compressor and pump amperage
- Optional seawater temperature sensors
- Optional refrigerant pressure transducers
- Optional loop water and seawater pressure transducers
- Control over optional electric immersion heat or fuel-fired boiler
- Optional remote unit shutdown for load shedding
- Optional fault signal output for remote alarm

MARINE AIR SYSTEMS®
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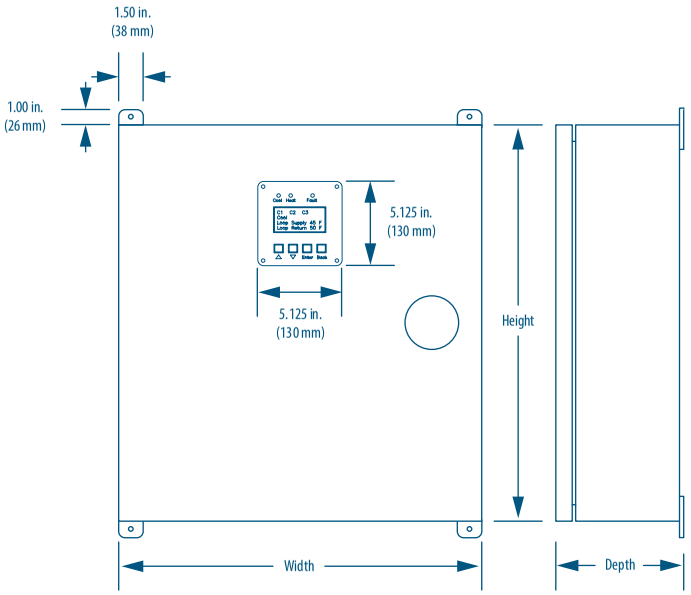
Specifications for Multi-Stage Chiller Control Box

No. of Stages [1]	Width (in/mm)	Height (in/mm)	Depth (in/mm)
2 to 3	22.0/560	24.0/610	7.75/197
4	30.0/760	24.0/610	7.75/197
5	35.0/890	24.0/610	7.75/197

[1] For six-stage electrical box dimensions, please contact a Dometic sales representative at 954-973-2477.

Dimensions



TWLC Options

As each TWLC multi-panel is custom built, there are many options to consider:

- Spare Pump Switch – Selector switches can be added for backup (spare) pumps.
- Multiple Power Inputs – Up to three power blocks can be installed to help divide the chiller and pump loads.
- Auxiliary Water Heater – Breakers and contactors to control an auxiliary water heater
- Fault Output Relay – A set of “dry” contacts can be installed to operate an alarm on the vessel’s monitoring system.
- Longer Wire Harness – Up to 30 ft. (9 m) is available; 10 ft. (3 m) is standard.
- Frame Mounted Panel – For mounting the TWLC on a framed chilled-water system.
- Load Shedding – Terminals to allow a load-shedding system to remotely shut down individual chillers.

In addition to the options above, two TWLC upgrade packages are available:

- Level 1 Upgrade Package – Adds current transducers for the compressors and pumps, seawater out temperature sensors in each chiller, a common seawater inlet temperature sensor, and the computer and modem adapters.
- The Level 2 Upgrade Package – All Level 1 package features, plus high- and low-refrigerant pressure transducers for each chiller, a seawater pressure transducer (to install on the discharge of the seawater pump) and a loop water pressure transducer (to install on the inlet of the loop water pump).

TWLC Keypad/Display

The easy-to-use keypad/display (shown below(features a backlit LCD and supplies critical system information, including faults.

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L-2345 Rev. 20120824

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Environmentally Responsible

Assembled in the USA

Dealer

IBEX Innovation Award Winner

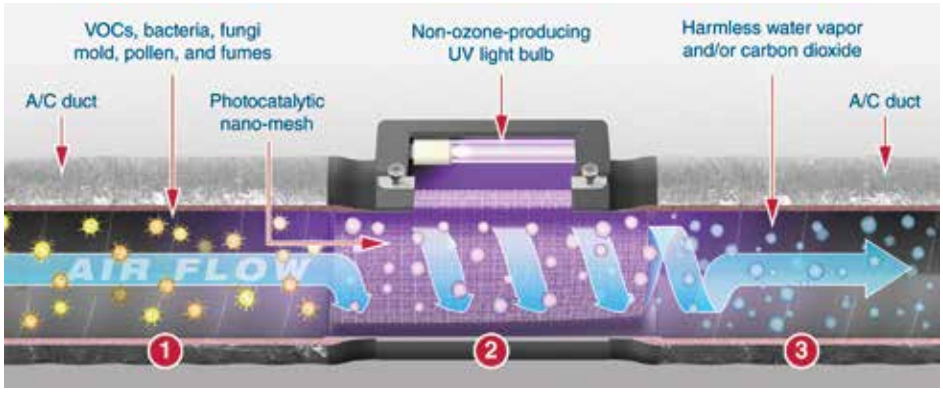
Breathe Easy™ In-Duct Air Purifiers

Stops Odors & Improves Air Quality

Reduce the odors of tobacco smoke, mildew, mustiness, chemical vapors and toilets, and inhale fresher, cleaner, healthier air on-board. The Breathe Easy™ In-Duct Air Purifier uses innovative Photocatalytic Nano-Mesh technology with ultraviolet (UV) light to improve your boat's air quality. The UV bulb inside uses a specific frequency of light that produces no harmful ozone.

The Breathe Easy nano-mesh is a three-dimensional foam structure coated with titanium-dioxide (TiO2) and provides 2200% more contact surface area than simple screen structures found in competing air purifiers. This is a significant advantage, as photocatalytic air purification occurs only when airborne contaminants contact the photocatalytic surface.

In addition, the TiO2 catalyst is restructured at the molecular level to have an increased number of contact surfaces. This formation puts 70% larger molecules on the contact surface and dramatically improves reactivity with contaminants.



How Breathe Easy Works:

1. Biological contaminants like VOCs, mold spores, bacteria, and viruses pass through the air conditioning duct and into the air purifier system.
2. UV light energy activates the titanium-dioxide catalyst on the surface of the nano-mesh structure. The molecules of pollutants and odors that come in contact with the catalytic nano-mesh structure are reconfigured into non-toxic elements. Vortex action maximizes air contact with the catalytic surface.
3. Significantly cleaner, healthier air exits the photocatalytic air purifier.

Key Benefits

- Eliminates unpleasant odors
- Uses an intense ultraviolet (UV) light that produces no harmful ozone
- Enhances air quality
- Cleaner air may lessen allergy and asthma symptoms
- Silent operation
- Up to 98% reduction in diesel fumes, acetone, benzene, formaldehyde, and other VOCs
- Up to 99.9% reduction in bacteria, fungi, mold, and pollen
- Photocatalytic nano-mesh structure is safe and powerful
- Photocatalytic nano-mesh structure will not degrade under UV light
- UV bulb is easy to replace
- Sizes for common duct diameters
- Will not significantly decrease air flow velocity

Product Testimonial

"I live onboard when we travel and always had problems with congestion and sinus drainage, but have not had a problem with that since we put the Breathe Easy on the boat. I'm very pleased with the product."

— Gray Ingram, Sportfishing Tournament Champion, Owner of Big Oh

"The crew had consistent problems with sore throats and coughs. So we've gone to Dometic. We discovered the air…went from being almost heavy and saturated to being a lot lighter. It was easier to breathe…cleaner. It's fantastic."

— James Rose-Innes, First Mate, 95 ft. Motor Yacht, Ft. Lauderdale, FL

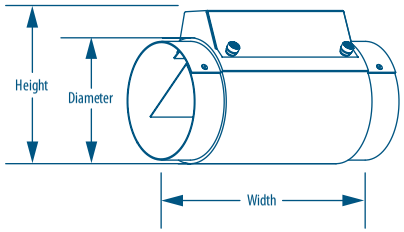
Dometic

Specifications for Breathe Easy™ In-Duct Air Purifiers

Model	4 IN. DIAMETER	5 IN. DIAMETER	6 IN. DIAMETER	7 IN. DIAMETER	8 IN. DIAMETER
Air Conditioner Capacity (BTU/h)	6000	7000 - 8000	10000 - 12000	14000 - 16000	24000
Voltages @ 50/60Hz (V)	115/220/230	115/220/230	115/220/230	115/220/230	115/220/230
Milliamps @ 115VAC/60Hz (mA)	200	200	200	200	200
Milliamps @ 220VAC/50Hz (mA)	350	350	350	350	350
Milliamps @ 230VAC/60Hz (mA)	200	200	200	200	200
Milliamps @ 12VDC (mA)	200	200	200	200	200
UV Bulb Watts (kW)	12	12	12	20	20
Min. Duct Diameter (in/mm)	4.5/115	5.5/140	6.5/166	7.5/191	8.5/216
Height (in/mm) [1]	5.25/134	6.5/166	7.5/191	8.5/216	9.5/242
Width (in/mm) [1]	10.5/267	10.5/267	10.5/267	13.5/343	13.5/343
Depth (in/mm) [1]	4.5/115	5.5/140	6.5/166	7.5/191	8.5/216

[1] All dimensions ± 0.30 in. (8 mm).

Dimensions



Breathe Easy Competitive Advantages

Photocatalytic Nano-Mesh Technology

- A three-dimensional Photocatalytic nano-mesh structure coated with titanium-dioxide (TiO2) provides greater surface area for maximum destruction of airborne contaminants.
- The nano-mesh structure creates very little static pressure, so there is no significant reduction in air flow velocity. In addition, the nano-mesh structure does not have to be cleaned or replaced.

Dometic's Photocatalytic Nano-Mesh Structure

Competitor's Screen

UV Lamps

A single ultraviolet (UV) bulb with dual tubes provides greater intensity and service coverage to activate more of the catalyst for high-performance results.

Safe and Effective Catalyst

TiO2 is found in many common products, such as pigments, processed foods, toothpaste, and costmetics. It is harmless to people, animals, and the environment.

Laboratory Test Results

Testing of the Breathe Easy In-Duct Air Purifier performed by Environmental Diagnostics Laboratory showed up to 98% reduction in volatile organic compounds (VOCs) and up to 99.9% reduction in bacteria, fungi, mold, and pollen grains.

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L-2701 Rev. 20131011

Specifications and availability subject to change without notice.

Environmentally Responsible

Assembled in the USA

Dealer

DAME Awards Special Mention

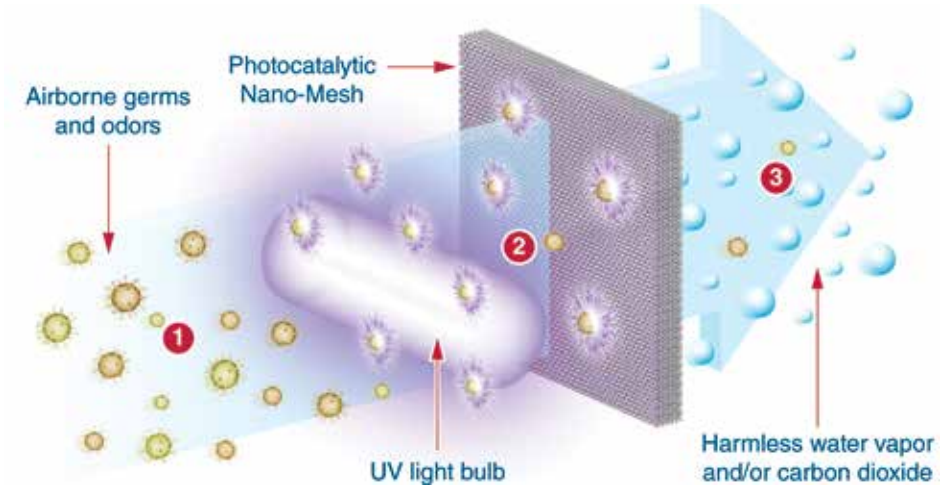
Breathe Easy™ Portable Air Purifier

Stops Odors & Improves Air Quality

Breathe Easy Portable Air Purifier and AC adapter with worldwide plugs and 12V power plug (inset)

Reduce the odors of tobacco smoke, mildew, mustiness, chemical vapors, and toilets, and inhale fresher, cleaner, healthier air virtually anywhere you go. Effective in areas up to 500 sq. ft. (46 sq. m), the Breathe Easy™ Portable Air Purifier uses innovative Photocatalytic Nano-Mesh technology with ultraviolet (UV) light to improve air quality. The UV bulb inside uses a specific frequency of light that produces no harmful ozone. The unit operates quietly and has two fan-speed settings. A worldwide AC adapter with plugs is included, as well as a 12V DC power plug.

The Breathe Easy™ nano-mesh is a three-dimensional foam structure coated with titanium-dioxide (TiO2) and provides 2200% more contact surface area than simple screen structures found in competing air purifiers. This is a significant advantage, as photocatalytic air purification occurs only when airborne contaminants contact the photocatalytic surface. In addition, the TiO2 catalyst is restructured at the molecular level to have an increased number of contact surfaces. This formation puts 70% larger molecules on the contact surface and dramatically improves reactivity with contaminants.



How Breathe Easy Works:

1. Volatile Organic Compounds (VOCs) and biological contaminants enter the air purifier system.
2. UV light energy activates the titanium-dioxide catalyst on the surface of the nano-mesh structure. The molecules of pollutants and odors that come in contact with the catalytic nano-mesh structure are reconfigured into non-toxic elements.
3. Significantly cleaner, healthier air exits the photocatalytic air purifier.

Key Benefits

- Eliminates unpleasant odors
- Uses an intense ultraviolet (UV) light that produces no harmful ozone
- Enhances air quality
- Cleaner air may lessen allergy and asthma symptoms
- Quiet operation with two fan speeds
- Up to 96% reduction in diesel fumes, acetone, benzene, formaldehyde, and other VOCs
- Up to 99% reduction in bacteria, fungi, mold, and pollen
- Photocatalytic nano-mesh structure is safe and powerful
- Photocatalytic nano-mesh structure will not degrade under UV light
- UV bulb is easy to replace
- Effective in areas up to 500 sq. ft. (46 sq. m)
- Worldwide AC power adapter with plugs and 12V DC power plug included

Product Testimonial

"While changing the fuel filter there was a minor diesel spill that permeated the boat. We discovered the Breathe Easy unit and it made all the difference in the world. No more smell and everybody could breathe easy!"

— Nancy Gates-Lee, Boat Owner, Boca Raton, FL

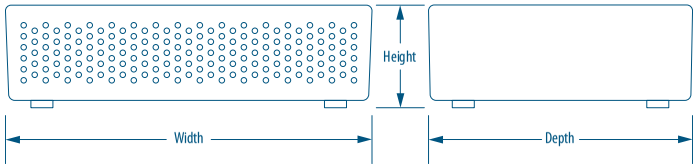
Dometic

Specifications for Breathe Easy™ Portable Air Purifier

Model [1]	Portable Air Purifier
Part Number (P/N)	4210805
Max. Effective Area (sq ft)	500
Milliamps @ 115VAC/60Hz (mA)	300
Milliamps @ 220VAC/50Hz (mA)	200
Milliamps @ 230VAC/60Hz (mA)	275
Milliamps @ 12VDC (mA)	500
UV Bulb Watts (kW)	5
Height (in/mm)	1.75/45
Width (in/mm)	6.25/159
Depth (in/mm)	4.5/115

[1] Replacement UV bulbs available (P/N 4210804)

Dimensions



Breathe Easy™ Competitive Advantages

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Dometic's Photocatalytic Nano-Mesh Structure

Competitor's Screen

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L-2712 Rev. 20131213

Specifications and availability subject to change without notice.

Environmentally Responsible

Dealer

Rated Merv 7

Breathe Easy™ Microparticle Air Filters

7X More Effective Than Ordinary A/C Filters

Enjoy cleaner, healthier air quality on your boat with Breathe Easy™ microparticle, anti-allergenic air filters for your air conditioning system. Breath Easy microparticle air filters are rated Merv 7, making them seven times more effective than ordinary air filters.

Breathe Easy microparticle air filters are efficient and disposable, and are available for most Dometic air conditioning systems. Installation takes only seconds using the existing brackets on either side of the evaporator face. Special pins are included to hold the air filter in place on units which do not have these brackets.

Because Breathe Easy microparticle air filters are highly efficient in removing impurities, they should be changed at frequent intervals to maintain air quality. Dometic recommends changing the filter once every two months when living aboard, once every four months when the air conditioner is used three weekends per month, and once every six months when the air conditioner is used only one or two times per month.

Complete installation and replacement instructions are provided in the air filter packaging.

Breathe Easy microparticle air filters are easy to remove...

...and install.

Key Benefits

- Rated Merv 7 - 7X more effective at capturing airborne microparticles than ordinary foam and mesh filters
- Capture fumes, odors, dust, lint, and pet dander
- Electrostatically-charged fibers attract and retain microparticles that pass through the filter
- Easy installation for all types and models of Marine Air air conditioning systems
- Custom sizes available

Dometic

Technical Specifications for Breathe Easy™ Microparticle Filters

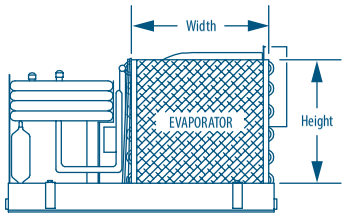
Filter P/N [1]	Fits Cruisair A/C Models	Fits Marine Air A/C Models	Fits Dometic A/C Models	Width x Height (in)	Width x Height (mm)
235000600	SXF5, SXF5-1, SHF5, SHF5-1, ZF5, ZF5-1	VCD5K/1, VCP5K, VCM5K, VCM5K/1, CLM5KC, CLM5KC/1	ECM5, ECD5	7-7/8 x 9	200 x 229
23500060	SXF7, SXF7-1, SHF7, SHF7-1, SXR7-1, SHR7-1, SXR10, SHR10, SXR12, SHR12	VCD7K/1, VCP7K, VCM7K, VCM7K/ 1, CMCD7K/1, CMCM7K, CMCM7K/1	ECM6.5, ECD6.5	9-3/8 x 10	238 x 254
23500060	SXR7, SHR7 (old style 7K), ZF3.5	CD3.5, SVCM3.5, CLM3.5	N/A	8-1/8 x 8	206 x 203
23500060	SXF10-1, SHF10-1, ZF10-1	VCD10K/1, VCM10K/1, CLM-10KC/1, CMCD10K/1, CMCM10K/	ECM9, ECD9	10-7/8 x 10	276 x 254
235000604	SXF10, SHF10, ZF10, ZF12	VCP10K, VCM10K, CLM10KC, CLM12KC, CMCP10K, CMCM10K	N/A	11-7/8 x 10	302 x 254
235000605	SXF12-1, SHF12-1, SXF16-1, SHF16-1, ZF12-1, SXR16, SHR16, ZF16-1, STX14, STX16, STQ14, STQ16, STH14, STH16	VCD12K/1, VCM12K/1, CLM-12KC/1, CMCD12K/1, CMCM12K/ 1, VCD16K/1, VCM16K/1, CLM16KC/1, CMCD16K/1, CMCM16K/1, VTD14, VTD16, VTM14, VTM16	ECM11, ECD11	10-7/8 x 12	276 x 305
235000606	SXF12, SHF12, SXF16, SHF16, SXF18, SHF18, ZF16	VCP12K, VCM12K, VCP16K, VCM16K, VCD18, CLM16KC, CMCP16K, CMCM16K	ECM15, ECD15	10-7/8 x 12	302 x 305
235000607	SXF24, SXF24-1, SHF24, SHF24-1 (special order)	VCD24K/1, VCP24K, VCM24K, VCM24K/1 (special order)	N/A	16-3/8 x 16	416 x 406
235000608	SX24, SH24 (special order)	N/A	N/A	15-1/8 x 17	384 x 432
235000638	STX6, STX8, STQ6, STQ8, STH6, STH8	VTD6, VTD8, VTM6, VTM8	N/A	8-7/8 x 10-1/4	226 x 261
235000639	STX10, STX12, STQ10, STQ12, STH10, STH12	VTD10, VTD12, VTM10, VTM12	N/A	10-7/8 x 11-1/2	276 x 293
235000700	N/A	N/A	ECD6	7-7/8 x 9	200 x 229
235000703	N/A	N/A	ECD10, ECD16	10-7/8 x 12	276 x 305

[1] Please pay close attention to AC models 10, 12, and 16, and whether or not they have the suffice "-1" or "/1" in the model number. Additionally, unit filters for all 5-16K models with the suffix "-1" and "/1" unit filters are interchangeable with "-2" and "/2" units.

Decide What Size You Need

Locate the data plate on the air conditioning unit to find its model number, then use the table above to match the model number to the correct filter P/N. If the model number is not listed above, measure the unit's evaporator face and find the filter P/N in the table with matching dimensions.

Dimensions



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L-2698 Rev. 20130621

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Environmentally Responsible

Dealer

Reduce Startup Amps by 65%

SmartStart™ Soft Starter

Eliminate Boat Air Conditioning Start-Up Spikes

The SmartStart™ is a unique device that smooths out startup power demand of the boat air conditioner's compressor instead of spiking it, reducing amp requirements by up to 65%. The technology uses dynamic feedback control to reduce the inrush of current by starting the compressor motor slowly. No other soft starter in the industry provides better performance.

Once running, an air conditioning compressor has a much lower, steady amp draw, but the initial locked-rotor amps needed to start the system can create high current surges that could adversely affect the operation of an overstrained power source.

In some situations, this gentler method of handling the power surge can mean the difference between keeping the generator you have or investing thousands of dollars in a larger generator.

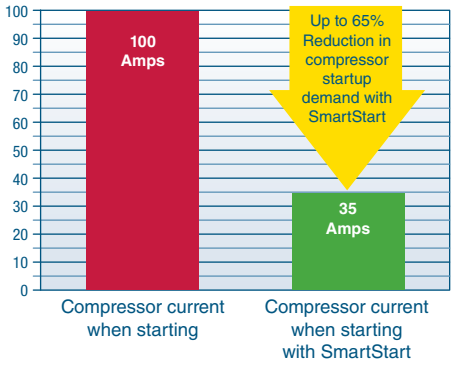
For boats without a generator, the SmartStart™ may allow the option of powering an air conditioning system from an inverter.

When running on dock power, a SmartStart™ may resolve issues where the power source or connection may be weak.

Not only does the SmartStart™ ease strain on the power source, it's also less stressful for the compressor itself since it starts more gently. Additionally, it provides valuable protection by shutting down the compressor if the power source or the connection to the compressor is briefly interrupted, then it reattempts a soft start after a three-minute delay.

All this power comes in a surprisingly small package. At only 5 x 3 x 2 in. (127 x 76 x 51 mm), the SmartStart™ takes up little space and weighs only 15 oz. (0.43 kg.). The SmartStart™ is wired directly into the air-conditioning system's electrical box.

SmartStart reduces compressor startup power demand by up to 65%.



Key Benefits

- Reduces strain on the power source
- Reduces brown-out effects at compressor start-up
- May enable an inverter to power the air conditioner
- May eliminate the need to upgrade the generator
- Inexpensive, small, and lightweight

Product Testimonial

"The generator's control circuit would trip and stop the generator due to the inrush of the Emiko's heat pump. The SmartStart reduced that inrush of current so the generator would continue to run.

We started with an inrush of 77 amps and finished with an inrush of only 20 amps. [The SmartStart] is a great solution to our problem."

— Mr. John Poole, Poole Refrigeration Service, Alameda, CA, M/V Emiko (37 ft. Nordic Tug)

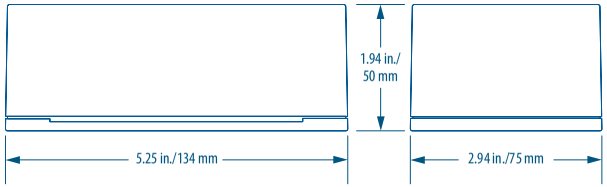
Dometic

Specifications for SmartStart™ Soft Starter

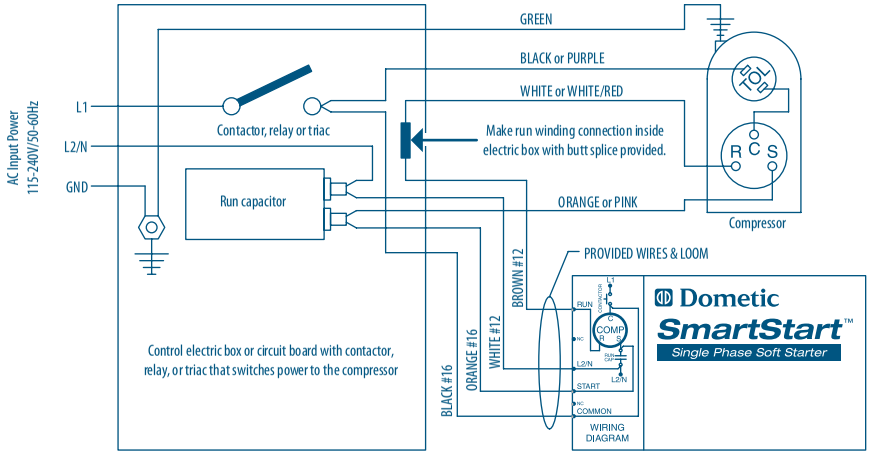
Model [1]	4220040	4220043	4220044
Min. Volts/Max. Volts/Cycle	115 V/50 Hz/60 Hz	208 V/240 V/50 Hz/60 Hz	208 V/240 V/50 Hz/60 Hz
Supported Comp. Capacity (BTU/h/kcal/h - BTU/h/kcal/h)	5000/1259.1 - 18000/4535.1	12000/3023.1 - 30000/7559.9	36000/9071.9 - 60000/15119.8

[1] Typical start surge reduction as compared to compressor locked rotor amperage (LRA) is 65%

Dimensions



Wiring Diagram



Optional SmartStart Mounting Tray

Model #4220045 (pictured below)

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L-2700 Rev. 20120824

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Environmentally Responsible

Assembled in the USA

Dealer

NEW

WhisperFan Controller

Silences Noisy AC-Driven Blower Motors

The WhisperFan Controller eliminates the noise generated by AC-driven blower motors at low fan speed settings. In addition, it provides overload protection to the blower motor and lets you precisely control the actual fan speed for each fan-speed setting (e.g. High, Medium, Low).

This electrical device uses pulse width modulation to make any AC-driven fan as quiet as a DC-driven fan. Simply install it in line between the electrical box and the blower. By pulsing the voltage hundreds of times faster than is possible with triacs, the smoother motor current results in quieter, extreme low-noise output across all fan speeds.

The WhisperFan Controller also provides more versatile fan-speed control. Want a more noticeable difference between your fan's medium speed and its high speed? The WhisperFan's two-button keypad allows you or an installer to specify the exact speed for all your fan speed settings. Further fine tuning can be done later from your cabin control's keypad (e.g. Cruisair Qht or Marine Air Systems Elite).

The WhisperFan works with all Cruisair and Marine Air cabin controls (Q-Logic, Passport, and SMXII) and with any AC blowers on either chilled water or direct expansion air conditioning systems.

The WhisperFan Controller is an easy and economical solution for an existing blower installation that may be too noisy. It's also great for anyone who wants to make precise adjustments to the fan-speed settings.

The WhisperFan Controller works with blowers up to 3 amps. WhisperFan can only support a single blower, so you must use one per fan.

The WhisperFan Control two-button keypad allows the boat owner or installer to adjust fan speed settings.

Key Benefits

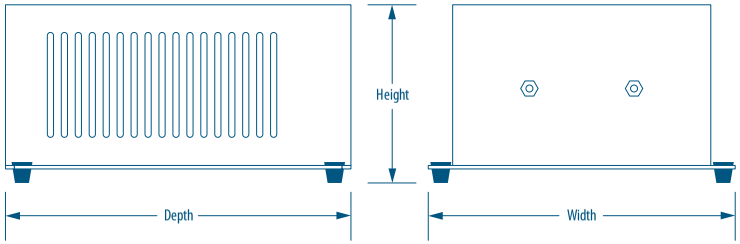
- Eliminates blower motor noise associated with low fan speeds
- Makes AC-driven blowers as quiet as DC-driven blowers
- User-programmable fan speeds
- Provides overload protection to blower motor
- Easy and economical solution to noisy fans
- Works with all Cruisair and Marine Air cabin controls
- Compatible with blowers up to three amps
- Supports blowers that are 115VAC/60Hz and 208-240VAC/50 or 60Hz
- Support for 115VAC/60Hz blower motors will be available soon
- CE approved

Dometic

Specifications for WhisperFan Controller

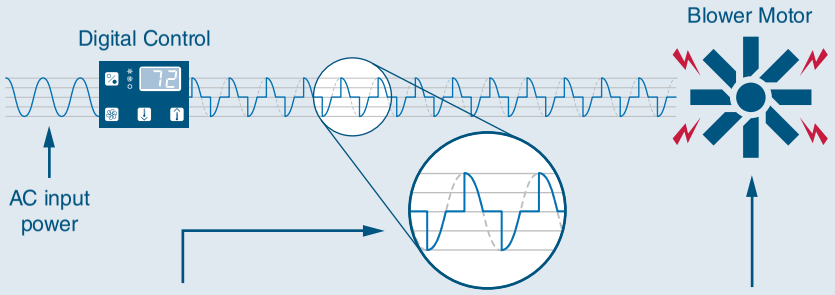
Model	WhisperFan Control-115V	WhisperFan Control-230V
Height-Display (in/mm)	3.19/82	3.19/82
Width-Display (in/mm)	5.5/140	5.5/140
Depth-Display (in/mm)	6.19/158	6.19/158

Dimensions



How the WhisperFan Control Works

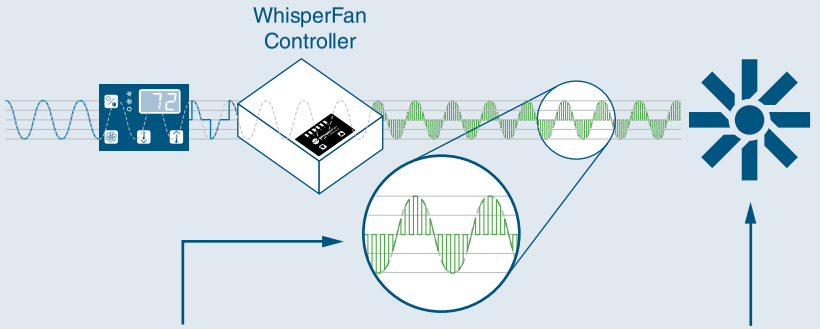
Typical blower motor operation ***AT LOW FAN SPEEDS*** (without the WhisperFan Control)



When a low fan speed is selected, a triac in the digital control "chops" the smooth, continuous AC current into short electrical bursts.

These bursts hit the blower motor, resulting in mechanical noise like humming and vibration

Typical blower motor operation ***WITH*** the WhisperFan Controller ***AT LOW FAN SPEEDS***



The WhisperFan Controller, installed between the digital control and blower motor, uses pulse width modulation (PWM) to pulse the voltage hundreds of times faster than is possible with triacs, resulting in a smoother stream of electrical current to the motor.

Electrical pulses hit the fan at a more rapid rate, eliminating mechanical noise

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L-3000 Rev. 20130823

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Dealer

March Marine Seawater Pumps

Ultra-Durable Centrifugal Seawater Pumps

Clockwise from left: Air-cooled AC-5CP-MD and liquid-cooled LC-5CP-MD, LC-3CP-MD, and LC-2CP-MD

March Marine centrifugal pumps are an excellent choice for providing seawater circulation for marine air conditioning systems. The proven magnetic drive eliminates the troublesome mechanical shaft seal.

There is no seal wear, power-robbing friction, or leakage through the seal. The impeller and drive magnets are strong, permanent ceramic types, which prevent slippage, ensuring that full motor power is converted into pumping power.

Centrifugal pumps require a flooded inlet and should be mounted below the waterline. “LC” models have liquid-cooled motors and can be run in open air or submerged. “AC” models have air-cooled, open drip-proof motors and must be in a dry environment.

Replacement parts for March pumps are available through Dometic.

Liquid-cooled models (clockwise from top): LC-5CP-MD, LC-3CP-MD, and LC-2CP-MD

Air-cooled model AC-5CP-MD

Key Benefits

- Magnetic-drive impeller means no seal to wear, leak, or repair
- Efficient motor with low power consumption
- Exclusive marine-grade base
- 115V and 230V models
- Liquid-cooled (submersible) and air-cooled motors available
- All components in contact with water are plastic, ceramic, or stainless steel
- 6 ft. (1.8 m) power cord is standard
- 1-year warranty on parts

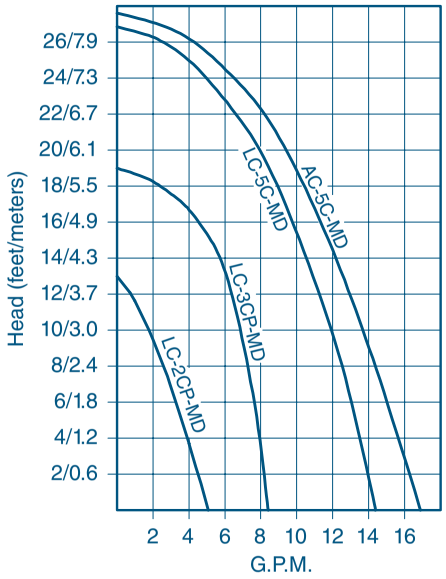
Dometic

Specifications for March Marine Seawater Pumps

Model	LC-2CP-MD		LC-3CP-MD		LC-5CP-MD		AC-5C-MD	
Voltage @ 50/60Hz 1-Ph (V)	115	230	115	230	115	230	115	230
Amps (A)	1	0.53	2	1	2.2	1.1	2.1	1
Max. Flow (gpm)	5		8.5		14.5		17	
Max. Head (ft/m)	13/3.1		19/5.8		27/8.3		27/8.3	
Ignition Protection	yes		yes		yes		no	
Motor HP (hp) [1]	1/35		1/20		1/8		1/8	
Motor Type [1]	TE/SUB		TE/SUB		TE/SUB		OD	
Inlet Connection (in)	¾		¾		1		1	
Outlet Connection (in)	¼		½		½		½	
Net Weight (lbs/kg)	5/2.3		9/4.1		15.5/7.1		10/4.6	
Wet End Assembly	A-507P		A-508P		A-506LC		A-506	

[1] TE/SUB motors are totally enclosed liquid-cooled types and can be operated in the open air or submerged; OD motors are open, drip-proof and air-cooled types which must be kept dry.

Performance Curve



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Environmentally Responsible

Assembled in the USA

Dealer

Seawater & Circulating Water Pumps

Reliable and Heavy-Duty Centrifugal Pumps

Marine Air specifies reliable, heavy-duty centrifugal pumps to provide a steady flow of cooling water through the air conditioning system.

The glass-reinforced polypropylene head pumps have magnetic drive impellers, and are available with submersible or air-cooled motors. Larger pumps have bronze heads with mechanical seals, and air-cooled, drip-proof motors. A wide range of pumps and motors are available for use in different power environments.

Centrifugal pumps must be mounted below the water line. Self-priming pumps are also available for above-water-line applications. A scoop type through-hull and a seawater strainer are recommended for proper operation.

When more than one air conditioning unit is served by a single pump, a separate pump relay is used. To complete the installation, Marine Air can also supply water manifolds, hose, and fittings.

Key Benefits

- High-capacity centrifugal pumps
- Quiet operation
- Low maintenance
- Single-phase motors have built-in thermal overload and ignition protection
- Three-phase ignition-protected motors
- Seawater-grade construction with glass-filled polypropylene or bronze pump heads
- Water-cooled (submersible) or air-cooled motors
- Vibration-isolation mounts reduce noise and vibration.
- High-head pressure models available
- Self-priming pumps available
- Meet or exceed applicable ABYC and US Coast Guard regulations, CE directives, and general Air Conditioning and Refrigeration (ARI) standards

MARINE AIR SYSTEMS®
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Specifications for Seawater & Circulating Water Pumps

Model [1]	Voltage (V)	Cycle [2]	Phase (Ph)	GPM/Feet of Head (gpm) [3]	Ignition Protection	Motor HP (hp)	Capacity (BTU/h) [4]	Height (in/mm)	Width (in/mm)	Depth (in/mm) [1]
P800-12VDC	12	N/A	N/A	2/7	no	1/150	6000	3.75/96	2.81/72	5.13/131
PMLL150-12VDC	12	N/A	N/A	2/7	no	1/150	6000	3/77	2.75/70	4.5/115
PMLL150-24VDC	24	N/A	N/A	2/7	no	1/150	6000	3/77	2.75/70	4.5/115
PML250	115	60 Hz	1	3/7	yes	1/35	12000	4.7/120	5.6/143	6.2/158
PML250C	230	50 Hz/60 Hz	1	3/7	yes	1/35	12000	4.7/120	5.6/143	6.2/158
P900-12VDC	12	N/A	N/A	3/6.5	no	1/25	12000	4.5/115	3.5/89	9/229
P900-24VDC	24	N/A	N/A	3/6.5	no	1/25	12000	4.5/115	3.5/89	9/229
PML500	115	60 Hz	1	6/14	yes	1/20	24000	5.6/143	5.6/143	7.4/188
PML500C	230	50 Hz/60 Hz	1	6/14	yes	1/20	24000	5.6/143	5.6/143	7.4/188
PML500CK	220	50 Hz	1	6/9.5	yes	1/20	20000	5.6/143	5.6/143	7.4/188
PMA500	115	60 Hz	1	7.5/14	yes	1/12	30000	5/127	4/102	9/229
PMA500C	230	50 Hz/60 Hz	1	7.5/14	yes	1/12	30000	5/127	4/102	9/229
PMA500CK	220	50 Hz	1	5/11	yes	1/12	20000	5/127	4/102	9/229
PMA1000	115	60 Hz	1	12/14	yes	1/8	48000	6.25/159	4.5/115	9.1/232
PMA1000C	230	50 Hz/60 Hz	1	12/14	yes	1/8	48000	6.25/159	4.5/115	9.1/232
P100	115	60 Hz	1	15/16	yes	1/3	60000	8.5/216	8.5/216	13.9/354
P100Z	230	50 Hz/60 Hz	1	15/16	yes	1/3	60000	8.5/216	8.5/216	13.9/354
P120	115	60 Hz	1	21/25	yes	1/3	84000	8.5/216	8.5/216	13.9/354
P120Z	230	50 Hz/60 Hz	1	21/25	yes	1/3	84000	8.5/216	8.5/216	13.9/354
P700	115	60 Hz	1	32/21	yes	1/3	128000	8.5/216	8.5/216	13.9/354
P700Z	230	50 Hz/60 Hz	1	32/21	yes	1/3	128000	8.5/216	8.5/216	13.9/354
P110-380V/3PH	380	50 Hz	3	15/15	yes	1/2	60000	8/204	7.5/191	15.4/392
P700Z-3PH	230	50 Hz/60 Hz	3	32/32	yes	1/2	128000	8/204	7.5/191	15.4/392
P700-460V/3PH	460	50 Hz/60 Hz	3	32/32	yes	1/2	128000	8/204	7.5/191	15.4/392
P700Z50-3PH	220	50 Hz	3	32/21	yes	1/2	128000	8/204	7.5/191	15.4/392
P700-380V/3PH	380	50 Hz	3	32/21	yes	1/2	128000	8/204	7.5/191	15.4/392
P710	115	50 Hz/60 Hz	1	43/32	no	1/2	172000	9.4/239	7.5/191	15.4/392
P710Z	230	50 Hz/60 Hz	1	43/32	no	1/2	172000	9.4/239	7.5/191	15.4/392
P710Z-3PH	230	60 Hz	3	43/32	yes	1/2	172000	9.4/239	7.5/191	15.4/392
P710-460V/3PH	460	60 Hz	3	43/32	yes	1/2	172000	9.4/239	7.5/191	15.4/392
P710Z50	220	50 Hz	1	43/30	no	3/4	172000	9.4/239	7.5/191	15.4/392
P710Z50-3PH	220	50 Hz	3	43/30	yes	3/4	172000	9.4/239	7.5/191	15.4/392
P710-380V/3PH	380	50 Hz	3	43/30	yes	3/4	172000	9.4/239	7.5/191	15.4/392
P711	115	50 Hz/60 Hz	1	54/42	no	1	216000	9.4/239	7.5/191	15.4/392
P711Z	230	50 Hz/60 Hz	1	54/42	no	1	216000	9.4/239	7.5/191	15.4/392
P711Z-3PH	230	60 Hz	3	54/42	yes	1	216000	9.4/239	7.5/191	15.4/392
P711-460V/3PH	460	60 Hz	3	54/42	yes	1	216000	9.4/239	7.5/191	15.4/392
P711Z50-3PH	220	50 Hz	3	54/44	yes	1	216000	9.4/239	7.5/191	15.4/392
P711-380V/3PH	380	50 Hz	3	54/44	yes	1	216000	9.4/239	7.5/191	15.4/392
P711Z-1.5HP	230	60 Hz	1	60/44	no	1½	240000	9.4/239	7.5/191	15.4/392
P711Z50-1.5HP	220	50 Hz	1	60/44	no	1½	240000	9.4/239	7.5/191	15.4/392

[1] For information about pumps larger than P711, please call the applications department at 954-973-2477.
[2] 50/60Hz pumps may be operated at 50Hz and reduced voltages but with a 17% reduction in flow and as much as a 30% drop in head; 60Hz only pumps may not be operated at 50Hz.
[3] Head calculation required for system is dependent on number and size of unit(s), length of hose, use of 90° elbows and the height of the unit(s) above the pump. For more information, please refer to the Marine Air Systems pump sizing guide or call the app.
[4] Determined using an average of 3 GPM per ton (12,000 BTU/hr) of air conditioning at given GPM and head, and are rated for direct expansion (DX) systems only.

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L-2129 Rev. 20120824

Specifications and availability subject to change without notice.

Environmentally Responsible

Assembled in the USA

Dealer

Pilot-House Defroster

Individual Ducts for Each Pane of Glass

The pilot-house defroster is designed to remove any moisture or condensation that may form on the inside of a windshield.

In order to accommodate the wide range of styles and number of glass areas in yachts, the Defroster incorporates individual ducts dedicated to each pane so that all surface areas are treated.

This unit will operate in two modes: fan only supplies ambient cabin air to the windshield for those times when simple ventilation is desired; and fan with thermostatically controlled electric heat that takes cabin air and raises the temperature through the use of finned heating elements mounted in the Defroster chamber.

The unit is typically mounted under the coaming area of the pilot house.

Key Benefits

- Custom configuration for up to six duct ring outlets
- May be mounted horizontally, vertically, flat or on edge
- Fan-with-heat or fan-only modes
- Lightweight marine-grade aluminum construction
- Tapered duct housing permits easy mounting and installation of ducting
- Slimline style fits easily in overhead applications or under pilot-house coaming area
- Two-part epoxy polyurethane paint resists chipping and corrosion
- Replaceable filter assembly
- Quiet and efficient squirrel cage fan for long service life
- Meets or exceeds applicable ABYC and US Coast Guard regulations, CE directives, and general Air Conditioning and Refrigeration (ARI) standards

MARINE AIR SYSTEMS®
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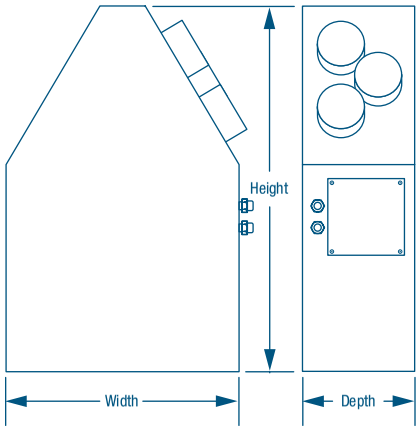
Specifications for Pilot-House Defroster

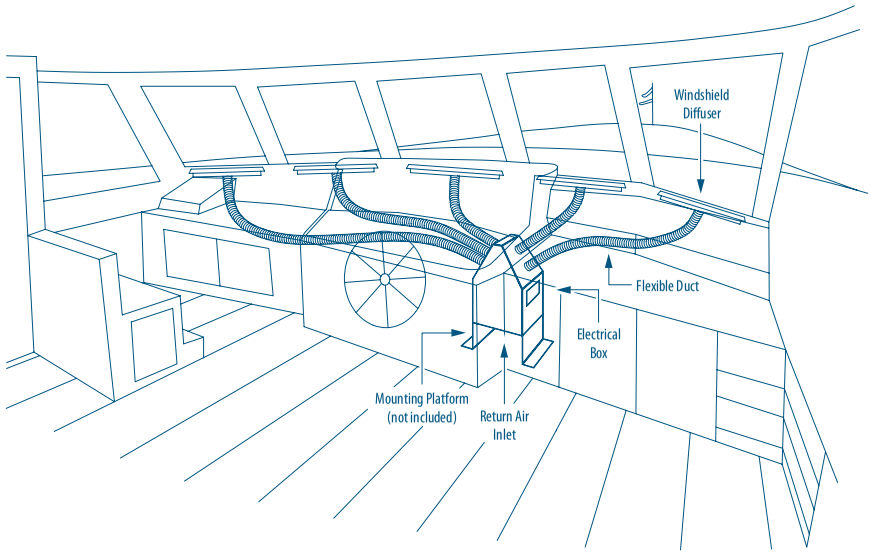
Model	PHD-1.5KW
Capacity - Fan (cfm)	305
Capacity - Heat (BTU/h) [1]	5120
Voltage (V)	230
Cycle (Hz)/Phase (Ph)	60/1
Full Load Amps (FLA) Heat (A)	7.2
Full Load Amps (FLA) Blower (A)	0.83
Heater Element Size (kW/hp)	1.5/2.1
Max. Circuit Breaker (A)	10
Min. Circuit Ampacity (A)	8
Height (in/mm) [2]	9.5/242
Width (in/mm) [2]	18/458
Depth (in/mm) [2]	29.13/740
Net Weight (lbs/kg) [3]	27/12.3
Gross Weight (lbs/kg) [3]	37/16.8

[1] Ratings at 60Hz; capacity reduced by 17% in 50Hz applications
[2] All dimensions ± 0.30 in. (8 mm).
[3] All weights ± 10%

Dimensions



Installation



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L-2134 Rev. 20120824

Specifications and availability subject to change without notice.

Environmentally Responsible

Assembled in the USA

Dealer

Variable Frequency Drives (Standard)

Smooths Out Chilled Water Compressor Startup Power Demand

Key Benefits

- Eliminates compressor start-up in-rush current
- 208/230V three-phase output with one- or three-phase input
- Full 60Hz capacity even at 50Hz input (230V only)
- Low electronic noise
- CE approved
- 380/460V three-phase models available

A Variable Frequency Drive (VFD) completely eliminates the large starting inrush current of the compressor by ramping up voltage and frequency in a controlled time period. This allows running on limited dockside power, and also protects the generator from overload.

In addition to eliminating inrush, the VFD will also run a 60Hz rated compressor at 60Hz even when input power is 50Hz, which allows full BTU capacity performance (230V only). The drive also protects the compressor by monitoring input voltage and output current, and will shut down if a problem is detected. On 208/230V systems, the VFD can “convert” single-phase input power to 3-phase output; however, the VFD current capacity must be derated (see table on second page).

The VFD unit produces a modified sine wave output for smooth acceleration and running, with precise frequency resolution. It is designed to operate in extreme environments, such as an engine room. However, the enclosure is ventilated, and must be kept dry. Any direct water contact can damage the unit.

Built-in noise filters are standard and the VFD is CE approved. The Schneider Electric Altivar 312 VFDs incorporate a class A EMC filter into their design. This helps prevent high frequency noise from affecting the AC power supply to which the drives are connected. If you have an application or a power system that requires even lower noise emission, then we recommend you purchase the class B EMC filters specifically designed to fit with the entire family of Altivar 312 VFDs. To reduce the harmonic distortion caused by the VFD, we recommend you purchase a line reactor sized appropriately for the particular VFD.

An LED display allows the user to monitor operation and faults. The VFD is pre-programmed from the factory and no further setup is required. Power cables are available through special order.

How to choose the right size Variable Frequency Drive:

- Chiller compressor must be 3 phase and each compressor requires a dedicated VFD.
- Multiply the chiller’s reverse cycle amps by 1.10 (10% safety factor).
- Choose the VFD from the Comp Voltage and Max AMP Rating columns (in the table on the following page) depending on compressor voltage and the phase of the input power supply, respectively.

Dometic

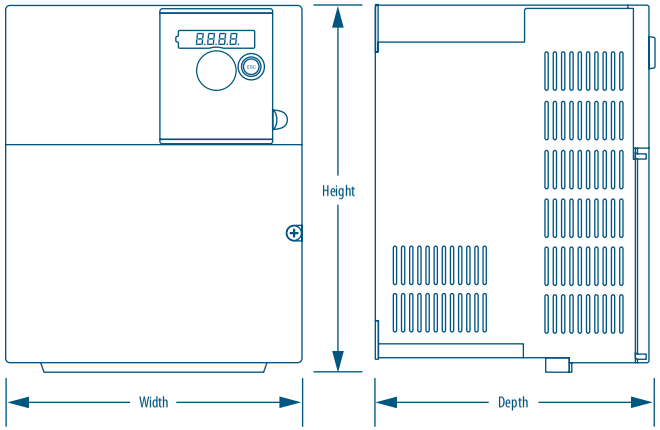
Specifications for Variable Frequency Drives (Standard)

Model [1]	VFD SQD17.5A 230V	VFD SQD27.5A 230V	VFD SQD33A 230V	VFD SQD54A 230V	VFD SQD66A 230V	VFD SQD9.5A 460V	VFD SQD14.3A 460V	VFD SQD17A 460V	VFD SQD27.7A 460V	VFD SQD33A 460V
Reference Number	4251104	4251105	4251106	4251110	4251111	4251108	4251112	4251202	4251109	4251201
Compressor Voltage (V) [2]	208/230	208/230	208/230	208/230	208/230	380/460	380/460	380/460	380/460	380/460
Max. Amps @ 3-PH. Input (A)	17.5	27.5	33	54	66	9.5	14.3	17	27.7	33
Max. Amps @ 1-PH. Input (A)	10.1	15.9	19.1	31.2	38.1	N/A	N/A	N/A	N/A	N/A
Height (in/mm)	7.2/183	9.1/232	9.1/232	13/331	13/331	7.2/183	9.1/232	9.1/232	13/331	13/331
Width (in/mm)	5.5/140	7.1/181	7.1/181	9.7/247	9.7/247	5.5/140	7.1/181	7.1/181	9.7/247	9.7/247
Depth (in/mm)	5.9/150	6.7/171	6.7/171	7.5/191	7.5/191	5.9/150	6.7/171	6.7/171	7.5/191	7.5/191

[1] For programmed VFDs, please call your sales representative with the reference number and programming information (output voltage, input phase, and output frequency).

[2] 208-230V models will perform at 60Hz output even with 50Hz input, allowing 60Hz compressors to perform at full capacity in 50Hz systems. High-voltage 380-480V models can be used at 380-420V 50Hz or 440-480V 60Hz, and output frequency should match the input.

Dimensions



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L-2413 Rev. 20130920

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Environmentally Responsible

Dealer

Pump Packages for Chilled Water Systems

Convenient Solutions for Simpler Chiller Installations

Key Benefits

- Convenient packaging of multiple essential components simplifies installation
- Expansion tank protects against thermal expansion
- Bladder-style expansion tank protects against loss of air cushion
- Dual-scale pressure gauge is convenient for US and international customers
- Pressure gauge connected to inlet pipe gives most accurate reading

Pump packages reduce the installation time of chilled water systems by combining several necessary components in one convenient package. The packages include a chilled-water pump, expansion tank, pump drain pan, dual-scale (psi/kPa) pressure gauge, and fill assembly. The fill assembly includes a hose connection, ball valve, and pressure-reducing valve.

The cushion of air in the expansion tank allows the water to expand and contract with temperature fluctuations. This relieves pressure that might otherwise result in leaks.

The latest design includes a bladder-style expansion tank. Without the bladder, air in the expansion tank would gradually dissolve into the water and be bled off. Eventually, the protective cushion of air would be gone.

The pressure gauge is connected to an inlet pipe on the pump for the most accurate reading of system return water pressure.

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Specifications for Pump Packages for Chilled Water Systems

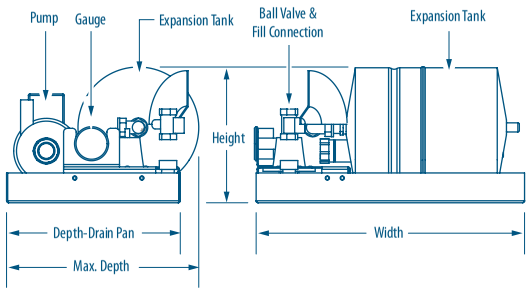
Model [1]	PMA1000			P700		P120	
Voltage (V)	115	230	240	115	230	115	230
Cycle (Hz)/Phase (Ph)	60/1		50/1	60/1		60/1	
Total Air Handler Capacity (BTU/h)	16000 - 23000		16000	49000 - 120000		24000 - 48000	
Inlet Connection (in)	½ /MPT			1 /FPT		1 /FPT	
Outlet Connection (in)	1 /FPT			1¼ /FPT		1¼ /FPT	
Height (in/mm) [2]	9.2/234			9.5/242		9.2/234	9.5/242
Width (in/mm)	12.9/328			17.1/435		12.9/328	17.1/435
Depth-Drain Pan (in/mm)	18/458			18/458		18/458	
Max. Depth (in/mm)	18/458			18/458		18/458	
Net Weight (lbs/kg)	33/14.1			49/22.3	49.25/22.4	48/21.8	
Gross Weight (lbs/kg)	47/21.4			62/28.2	69.5/31.6	62/28.2	

[1] Pump packages do NOT include a backflow preventer. If the chilled water fill assembly is fed by a potable water supply, then a reduced pressure zone (RPZ) backflow preventer should be installed between the fill assembly and the supply to prevent contamination of the potable water.

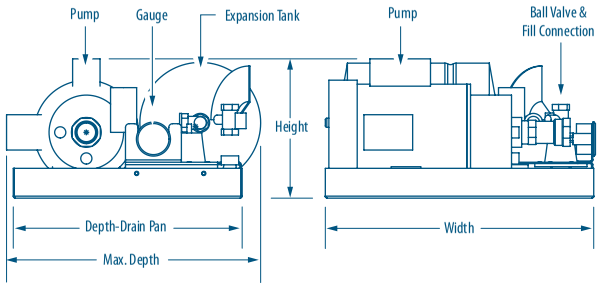
[2] All dimensions ± 0.125 in. (3 mm).

Dimensions

PMA1000



P120/P700



Safety Notice:

Pump packages do NOT include backflow preventers. If the chilled water fill assembly is supplied by a potable water supply, then a reduced pressure zone (RPZ) backflow preventer should be installed between the fill assembly and the potable water supply to prevent contamination of the water.

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L-2541 Rev. 20120824

Specifications and availability subject to change without notice.

Environmentally Responsible

Assembled in the USA

Dealer

Air Distribution Components

Grilles, Duct, & Transition Boxes to Complete the A/C System

Supply and return air grilles are available in several wood types, painted aluminum and plastic, and come in a wide range of sizes and configurations

Marine Air and Cruisair offer supply and return air grilles in a wide assortment of dimensions, styles, and materials to complement any yacht's interior. Custom sizes, materials, and colors are available.

The louvres of supply air grilles are secured by nylon bushings for easy and dependable positioning. Return air grilles have fixed louvres. Wood return air grilles have a lint screen which can be removed for cleaning.

Round plastic supply air grilles are offered in several colors and are available with and without shut-off dampers.

Marine Air and Cruisair also offer additional air distribution components, such as duct and transition boxes, to complete the boat air conditioning system. There are two types of duct available: round/wire with woven fabric and round/wire and mylar fabric shell with 1.0 in. (25 mm) thick insulation. A full range of diameters and lengths are availble, and all duct attaches easily to duct rings, grilles, and transition boxes.

Transition boxes come in two styles: Fully-insulated aluminum construction and vacuum-formed ABS plastic. Aluminum boxes come in standard and custom sizes and are ideal for applications where space is limited. ABS boxes are off the shell and feature insulated mounting pads and a unique stepped-ring design for flexibility.

Flexible duct is available in a wide range of diameters and lengths.

Vacuum-formed ABS transition boxes have insulated mounting pads and a stepped duct ring design.

Aluminum transition boxes are available in standard and custom sizes and configurations.

Key Benefits

- Supply and return air grilles available in aluminum, plastic, and wood construction in a wide range of sizes and configurations
- Grilles are available in custom finishes, colors, and sizes
- Wood return air grilles have pop-out louvres and easy-to-clean filters
- Wood return air grilles have pop-out louvres and easy-to-clean filters
- Wood supply air grilles have double-deflection, moveable louvres available in anodized bronze or aluminum finish
- Aluminum return air grilles have durable fixed-vane louvres and are available with or without filters
- Aluminum supply air griles have adjustable louvres to direct air flow
- Durable polyurethane paint finishes available with aluminum grilles
- Transition boxes available in aluminum or vacuum-formed ABS plastic construction and do not restrict airflow
- Aluminum t-boxes are full insulated and ideal for applications where space is limited; standard and custom sizes
- ABS t-boxes have insulated mounting pads and a unique stepped ring design for flexibility

MARINE AIR SYSTEMS®
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Grille Sizing by Air Handler BTU/hr Capacity

Capacity (BTU/hr)	Return Air Grille Size (sq. in/sq. cm)	Supply Air Grille Size (sq. in/sq. cm)	Duct Ring Diameter (in/mm)
4000	64/413	32/206.5	4/102
6000	70/451.6	35/225.8	5/127
9000	98/632.3	49/316	6/152
10000	100/645.2	60/387	6/152
12000	130/838.8	70/451.6	6/152
18000	200/1290.4	100/645.2	7/178
24000	240/1548.5	140/903.3	8/203
36000	360/2322.7	196/1264.6	8/203

Return and Supply Air Grilles

Wood Grilles

- Cut-out dimensions are equal to the grille's nominal height and width.
- Outside frame dimensions are 0.9375 in. (± 0.0625) (24 mm (± 2 mm)) larger than nominal grille size.
- Grille depth, as measured from back of frame: Primary supply air grilles (VH models) are 1.375 in. (35 mm), secondary closeable supply air grilles (VML models) are 1.875 in. (48 mm), and return air grilles (RA models) are 0.875 in. (22 mm).
- Frame (flange) dimensions are 0.563 (14 mm) on all sides.

Aluminum Grilles

- Cut-out dimensions for supply air grilles (TH and TV models) and return air grilles without filter (TRA) are 0.375 in. (10 mm) smaller than nominal grille size. Cut-out dimensions for return air grilles with filter (TRAF models) are 0.125 in. (3 mm) smaller.
- Outside frame dimensions for all aluminum grilles are 0.875 in. (22 mm) larger than nominal grille size.
- Grille depth, as measured from back of frame: Supply air grilles are 0.875 in. (22 mm) and return air grilles are 1.0 in. (25 mm).
- Frame (flange) dimensions are 0.625 in. (16 mm) on all sides.

Plastic Grilles (Circular)

- Cut-out dimensions are 2.0 in. (51 mm) for 2SA models (2 in. duct), 3.0 in. (76 mm) for 3SA models (3 in. duct), and 4.0 in. (102 mm) for 4SA models (4 in. duct).
- Grille depth, as measured from back of frame: 2SA models are 1.31 in. (33 mm), 3SA models are 2.16 in. (55 mm), and 4SA models are 2.38 in. (60 mm).
- Frame (flange) diameter is 2.75 in. (70 mm) for 2SA models, 3.875 in. (98 mm) for 3SA models, and 5.50 in. (140 mm) for 4SA models. A special adapter is available to use with the 4SA for 3.0 in. (76 mm) duct.

Transitions

Vacuum-Formed Transitions

- Opening dimensions are 0.375 in. (10 mm) larger than the transition size.
- Flange-to-flange dimensions are 1.5 in. (38 mm) larger than the transition size.
- Depth, as measured from back of flange: 4.0 in. (102 mm) for 4x models, 4.5 (114 mm) or 5.75 in. (146 mm) for 5x and 6x models with round or obround duct rings, respectively.
- Flange dimensions are 0.5625 (143 mm) on all sides.

Square Vacuum-Formed Transitions

- Available in 5.25 in. (134 mm) and 6.25 in. (159 mm) square.
- Opening dimensions are 0.5 in. (13 mm) larger than the transition size.
- Flange-to-flange dimensions are 1.75 in. (44 mm) larger than the transition size.
- Depth is 0.125 in. (3 mm) more than the transition size.
- Flange dimensions are 0.625 in. (16 mm) on all sides.

Vacuum-Formed Transition Boxes

- Height, with mounting flange, for 10,000, 12,000, and 16,000 t-boxes is 7.875 in. (200 mm); 7,000 t-box is 6.875 in. (175 mm).
- The 10,000, 12,000, and 16,000 t-boxes accommodate 6 in. (153 mm), 5 in. (127 mm), and 4 in. (102 mm) duct rings on one side and 5 in., 4 in, and 3 in. (76 mm) duct rings on the other side.
- The 7,000 t-box accommodates 5 in. (127 mm) and 4 in. (102 mm) duct rings on one side and 4 in. and 3 in. (76 mm) duct rings on the other side.

Aluminum Transitions

- Opening dimensions are 0.25 in. (7 mm) larger than the transition size.
- Flange-to-flange dimensions are 1.75 in. (44 mm) larger than the transition size.
- Depth of aluminum transitions is 0.25 in. (7 mm) more than the diameter of the largest round ring, as measured from the back of the flange.
- Flange dimensions are 0.75 in. (19 mm) on all sides.

Obround (OB) Ring Dimensions

- 3 in. ABS (76 mm) OB = 3.875 x 1.625 in. (95 x 42 mm), 2 in. (51 mm) depth
- 4 in. ABS (102 mm) OB = 5.125 x 2.25 in. (130 x 58 mm), 2 in. (51 mm) depth
- 5 in. ABS (127 mm) OB = 6.5 x 2.625 in. (165 x 67 mm), 2 in. (51 mm) depth
- 6 in. ABS (153 mm) OB = 7.438 x 3.375 in. (189 x 86 mm), 2 in. (51 mm) depth
- 7 in. ABS (178 mm) OB = 9.0 x 3.625 in. (223 x 92 mm), 2 in. (51 mm) depth
- 8 in. aluminum (204 mm) OB = 9.25 x 5.0 in. (235 x 127 mm), 2 in. (51 mm) depth

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L-2130 Rev. 20140117

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Environmentally Responsible

Assembled in the USA

Dealer

Cools & Heats

Dometic EnviroComfort Retrofit Kits (R-410A)

Climate Control At the Touch Of a Button

Enjoy ideal temperatures on your boat year-round with EnviroComfort (ECD) self-contained air conditioning kits, now available with R-410A refrigerant, an environmentally safe gas.

ECD R-410A kits are available in 6,000, 10,000, and 16,000 BTUs of cooling and heating so you can size the system to suit your boat for ultimate comfort in a range of climates.

All units have high-velocity blowers with internal motors for a more compact installation footprint. The blower can be rotated to a horizontal or vertical position for greater installation flexibility. Units are built on an easy-to-plumb stainless-steel drain pan, and the pre-installed return-air filter is removable for cleaning.

ECD units are operated by a compact digital control/display (included) that features a bright green LED and large buttons. For added installation convenience, the plastic electrical box can be mounted remotely.

ECD kits are ideal for replacing an existing air conditioning system or for a new air conditioning installation. The Retrofit Kit includes the ECD self-contained air conditioning unit and digital control with bezel and is intended to replace an older self-contained air conditioner of comparable capacity. The ECD6K will replace a 5,000 to 7,000 BTU/hr unit; the ECD10K will replace an 8,000 to 11,000 BTU/hr unit; and the ECD16K will replace a 12,000 to 16,000 BTU/hr unit.

The Installation Kit includes all air distribution and plumbing components that, when combined with the Retrofit Kit, comprises an entirely new air conditioning system installation that is suited for treating one interior space. If air conditioning a second interior space is desired, add the Dual Duct Kit which includes a "Y" duct ring connector, 12.5 ft. (3.8 m) of flexible insulated duct, and a circular supply air grille.

The ECD Installation Kit includes all air distribution and plumbing components that, when combined with the ECD Retrofit Kit, comprise a complete air conditioning system installation.

The optional Dual Duct Kit will air condition an additional interior space.

Key Benefits

- High velocity, rotatable blower for horizontal or vertical installation
- Environmentally safe R-410A refrigerant
- Compact Dometic digital display/control
- Plastic remote electrical box for convenience in mounting
- Stainless-steel drain pan
- Pre-installed return-air filter, easily removable and cleanable
- Small, compact, space-saving design
- Retrofit Kit includes digital control and replaces an existing self-contained air conditioning unit
- Optional Dual Duct Kit for air conditioning an additional interior space
- Available in 6,000, 10,000, and 16,000 BTU/hr capacities

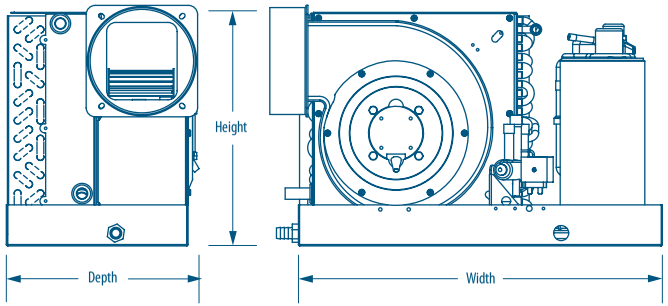
Dometic

Specifications for Dometic EnviroComfort Retrofit Kits (R-410A)

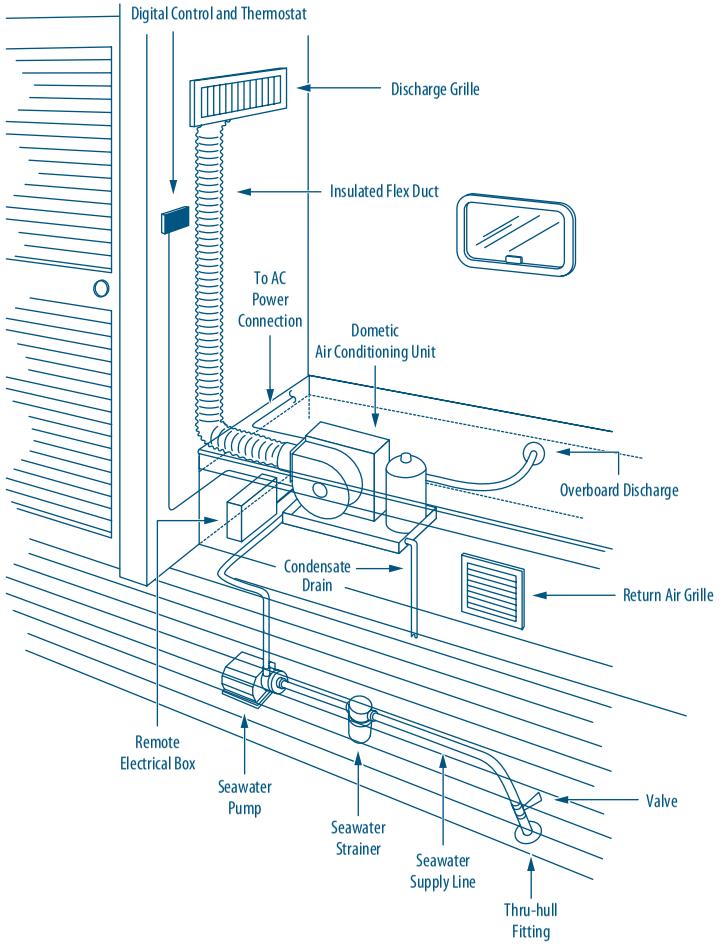
Model	ECD6K-410A	ECD10K-410A	ECD16K-410A	
Part Number (P/N)	207500306	207500310	207500316	207500017
Capacity (BTU/h)	6000	10000	16000	
Voltage (V)	115	115	115	230
Cycle (Hz)/Phase (Ph)	60/1	60/1	60/1	
Full Load Amps (FLA) Cool (A)	4.6	7	10.5	5.1
Full Load Amps (FLA) Heat (A)	5.9	9.1	13.7	6.6
Locked Rotor Amps (LRA) (A)	36	42	62	34
Max. Circuit Breaker (A)	15	25	40	20
Min. Circuit Ampacity (A)	12	16	25	12
Refrigerant Type	410A	410A	410A	
Height (in/mm) [1]	11.25/286	13.25/337	13.5/343	
Width (in/mm) [1]	16/407	20/508	20/508	
Depth (in/mm) [2]	9/229	9.63/245	11.25/286	
Min. Supply Duct Size (in/mm) [1]	4/102	6/153	6/153	
Seawater Inlet Connection (in/mm)	⅝ /16	⅝ /16	⅝ /16	
Net Weight (lbs/kg) [1]	38/17.3	57/25.9	64/29.1	67/30.4
Height-Electrical Box (in/mm)	8.75/223	8.75/223	8.75/223	
Width-Electrical Box (in/mm)	6.5/166	6.5/166	6.5/166	
Depth-Electrical Box (in/mm)	2.77/71	2.77/71	2.77/71	

[1] All dimensions ± 0.30 in. (8 mm).

Dimensions



Installation



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L-3003 Rev. 20140117

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Environmentally Responsible

Assembled in the USA

Dealer

No Plumbing or Ducting

DuraSea Rooftop Air-Cooled Air Conditioner

Drop-In Cooling Unit That Requires No Plumbing or Ducting

The DuraSea Rooftop is a 15,000 BTU/hr air conditioner* built to endure harsh marine environments. Ideal for patrol boats, house boats, and other vessels, it is designed to be installed on a flat deck or rooftop and cool the area directly below. It is air cooled and requires no plumbing or ducting.

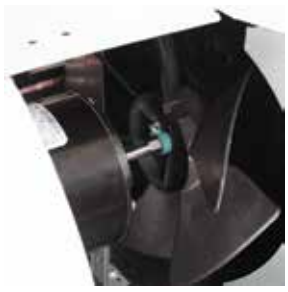
The air-distribution box (ADB), sold separately, attaches to the underside of the unit. Accessible from the interior cabin, the ADB contains the thermostat, fan controls, return-air vent and two supply-air vents that blow in opposite directions for increased cooling capability. The three-speed blower works in cooling and ventilation-only modes.

Both the condenser and evaporator coils are coated using the ElectroFin® E-coat process which provides superior resistance to salt-air corrosion and UV damage when compared to spray coating. E-coat employs electrically charged molecules to coat the components for complete and uniform coverage with no material bridging between the fins. The E-coat material was salt-spray tested for 5,000 hours, not 1,000 like competing units. In addition, the condenser and evaporator fans are also corrosion resistant and will not rust. Unlike the competition, we use oversize coils for improved performance and dehumidification.

Rugged and strong, the DuraSea Rooftop weighs only 103 lbs. (46.7 kg). The heavy-duty reinforcement plate ties the evaporator and condenser together to minimize vibration and movement. A vibration-isolating L-bracket on the compressor and fan motor is incorporated for additional stabilization. Rubber clamps and bushings further control noise and vibration. The powder-coated base pan is 15% thicker than other models.

* The 50Hz model is rated at 12,000 BTU/hr.

Compressor is bracketed at top as well as bottom to minimize vibration and movement while under way.



Weather-tight fan motor and bearings with a stainless-steel shaft.

The air distribution box (sold separately) mounts on the ceiling to provide A/C controls.

Key Benefits

- Air-cooled unit designed for rooftop or deckmount installation
- No plumbing or ducting required
- Provides 15,000 BTU/hr. of cooling (60Hz model only)
- Rugged and strong, yet lightweight
- High efficiency, low power consumption
- ElectroFin® E-coat process for superior resistance to corrosion and UV damage
- Vibration-free operation
- Compressor stabilization to endure extreme motion
- Three-speed high-performance fan for cooling and ventilation
- Sealed motor and bearings
- Stainless-steel fan-motor shaft
- Oversize coils for better performance and dehumidification
- Environmentally safe R-410A refrigerant
- Air distribution box (sold separately) includes mechanical control and interior panel
- Optional electric heat

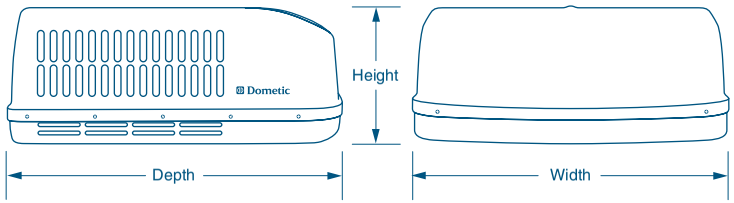
Dometic

Technical Specifications for DuraSea Rooftop Air Conditioner

Model	DuraSea Rooftop	
Capacity (BTU/hr)	15000	12000
Voltage/Cycle	115V/60Hz	240V/50Hz
Run Amps	15.3	7.0
Locked Rotor Amps (LRA)	66.0	28.0
Refrigerant Type	R-410A	R-410A
Height (in/mm)	13.1/334	13.1/334
Width (in/mm)	29.8/759	29.8/759
Depth (in/mm)	34.8/886	34.8/886
Net Weight (lbs/kg)	103/46.7	102/46.3

[1] All dimensions ± 0.30 in. (8 mm).
[2] All weights ± 10%

Dimensions



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L-3010 Rev. 20130118

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Environmentally Responsible

Assembled in the USA

Dealer

Exceeds 6,000 Hr. Salt-Spray Test

DuraSea Series Air-Cooled Condensers

The Only Marinized Air-Cooled Condenser

Dometic DuraSea air conditioning condensing units are designed for maximum durability in the harshest of nautical applications. These rugged units offer long service life, exceptional performance, energy conservation, and reliability.

The DuraSea's cabinet is constructed of stainless-steel 304, which resists heavy salt-spray and also provides UV protection. Designed for deck or rooftop mounting, the optional risers elevate the unit above the mounting surface to provide excellent water drainage and protect the coil from debris and salt water. To further fortify the unit from severe marine conditions, corrosion-resistant stainless-steel fasteners are used, and all other external components have a protective coating. The control box and compressor are strategically located within the cabinet for easy service access and for extra protection against corrosion.

All DuraSea units employ scroll compressors, the latest in high-efficiency, reliable compressor technology. They reduce noise and vibration, and have a higher tolerance of liquid refrigerant and system contaminants. Scroll compressors also feature low start torque to minimize the starting-current spike that occurs with old-technology compressors. Units are available in 410A refrigerant or 417A refrigerant for retrofit of existing systems.

The new 7.5- and 10-ton sizes offer a compact footprint in an "industrial" styled equipment design that includes forklift slots and lifting eyes.

DCA60 shown with service panel removed and optional risers which protect the unit from debris.

Key Benefits

- Designed for workboats, platform, and military vessels
- Built to withstand the harsh elements of the commercial marine environment
- Operates with most evaporators
- Hermetically-sealed scroll compressor with internal overload protection
- Permanently lubricated fan motor with Ingress Protection of IP 54 or better
- High-efficiency copper tube and aluminum fin coil with dipped E-coating that exceeds 6,000-hour salt spray test
- Copper tube/copper fin coil upgrade available for the ultimate in corrosion protection
- Brass base valves with sweat connections and service ports
- Vertical fan mount design
- High- and low-pressure controls
- Heavy-duty contactor with lug connections
- Optional risers elevate the unit above the mounting surface to protect the coil from salt water and debris (3-ton to 6-ton models only)
- Optional stainless-steel 316 cabinet construction for maximum corrosion resistance

Special Options

- Nema 4 electric box
- Fan cycling control
- Three-phase monitor
- Crankcase heater

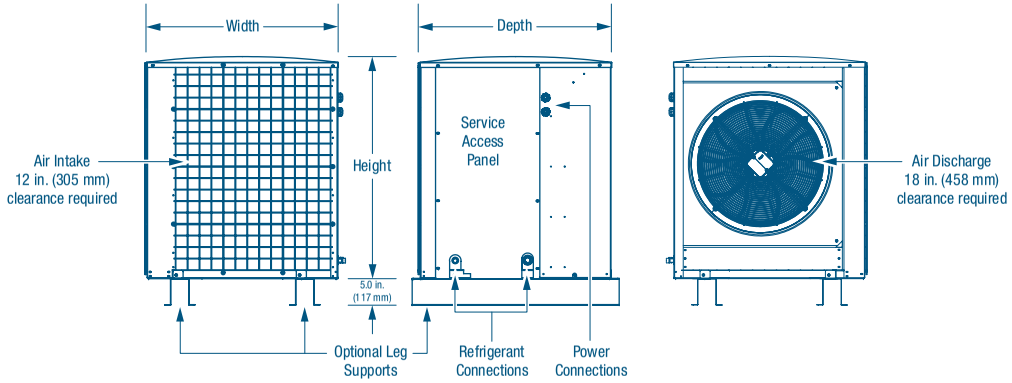
Dometic

Specifications for DuraSea Series Air-Cooled Condensers

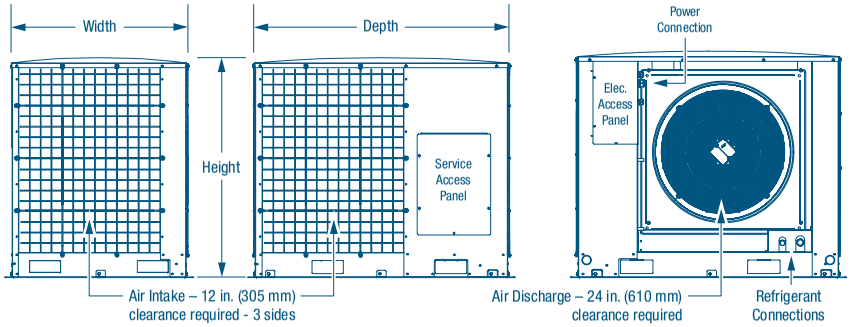
Model	DCA36D	DCA36E	DCA48D	DCA48E	DCA60D	DCA60E	DCA72D	DCA72E	DCA90D	DCA90E	DCA120D	DCA120E
Nominal Capacity (BTU/h)	36000	36000	48000	48000	60000	60000	72000	72000	90000	90000	120000	120000
Voltage (V)	230	460	230	460	230	460	230	460	230	460	230	460
Cycle (Hz)/Phase (Ph)	60/3	60/3	60/3	50/3	60/3	60/3	60/3	60/3	60/3	60/3	60/3	60/3
Run Load Amps (RLA) (A)	10.9	5	12.7	6.6	14.8	7.4	17.9	8.9	25.5	13.4	31.3	15.3
Locked Rotor Amps (LRA) (A)	95	45	120	60	123	70	160	87	235	110	267	142
Full Load Amps (FLA) Blower (A)	3.6	2	3.6	2	3.6	2	3.6	2	3.6	2	8.5	4.9
Max. Circuit Breaker (A) [1]	35	12	30	20	30	15	55	40	70	30	75	30
Min. Circuit Ampacity (A) [2]	25	10	24	15	25	14	40	26	50	25	55	26
Min. Volts (V)/Max. Volts (V)	197/253	414/506	197/253	414/506	197/253	414/506	197/253	414/506	197/253	414/506	197/253	414/506
Refrigerant Type	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A
Air Flow (cfm)	6000	6000	6000	6000	6000	6000	6000	6000	6000	6000	10000	10000
Height (in/mm) [1]	38.5/978	38.5/978	38.5/978	38.5/978	38.5/978	38.5/978	38.5/978	38.5/978	42/1067	42/1067	42/1067	42/1067
Width (in/mm)	33/839	33/839	33/839	33/839	33/839	33/839	33/839	33/839	33/839	33/839	33/839	33/839
Depth (in/mm)	33/839	33/839	33/839	33/839	33/839	33/839	33/839	33/839	48/1220	48/1220	48/1220	48/1220
Refrigerant Line Connection-Discharge (in/mm) [3]	½ /13	½ /13	½ /13	½ /13	½ /13	½ /13	½ /13	½ /13	⅞ /23	⅞ /23	⅞ /23	⅞ /23
Refrigerant Line Connection-Suction (in/mm) [3]	⅞ /23	⅞ /23	⅞ /23	⅞ /23	⅞ /23	⅞ /23	⅞ /23	⅞ /23	1⅛ /29	1⅛ /29	1⅛ /29	1⅛ /29
Sound Level (dB)	84	84	84	84	84	84	84	84	84	84	87	87
Net Weight (lbs) [4]	290	290	310	310	365	365	375	375	475	475	525	525

[1] Must use time-delay fuses or HACR type circuit breakers of the same size as listed
[2] Wire size should be determined in accordance with applicable electrical codes; extensive wire runs require larger size wires
[3] Up to 50 ft. (15.2 m) in equivalent line length.
[4] Weight for aluminum fin condenser coil with coating

Dimensions



DuraSea 7.5- to 10-Ton Dimensions



DuraSea Model Number Nomenclature

D C A 0 3 6 A 4 6 6 3 C 0 A A

DuraSea Condensing Unit

Refrigerant Type
A = R410A
B = R417A

Nominal Tonnage
036 = 3 Tons
048 = 4 Tons
060 = 5 Tons
072 = 6 Tons
090 = 7.5 Tons
120 = 10 Tons

Control Type
A = None (use with 24VAC thermostat)
Q = Q Control

Voltage
2361 = 230V/60Hz/1-Ph
2251 = 220V/50Hz/1-Ph
2363 = 208-230V/60Hz/3-Ph
4663 = 460V/60Hz/3-Ph
3853 = 380V/50Hz/3-Ph

Options
A = None
B = Nema 4x electric box and heatshrunk electric connections
C = Low ambient fan cycling control
D = Phase monitor
E = Valve Fan Side (VFS) standard on 7.5/10-ton models
F = Variable frequency drive
G = Crankcase heater
H = Suction accumulator
I = Reserved for future use
J = Reserved for future use
K = Combination of options B, C, D, G, and H

Design Revision
A = Initial Rev

Not Used
0 = Not used

Coil Options
A = Al Fin/Copper Tube
B = E-Coat Al/Al
C = Copper Fin/Tube

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L-2544 Rev. 20130222

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Environmentally Responsible

Assembled in the USA

Dealer

Radome Environmental Control Units

Keeps Sensitive Domed Electronics Cool

Safe navigation relies on your ship's radar and communications equipment, and as with all electronics, overheating leads to equipment failure. The Radome Environmental Control Unit (ECU) is specifically designed to provide air conditioning within the dome enclosure, ensuring optimum temperatures for the critical equipment inside.

As you would expect from the world leader in marine air conditioning technology, this air-cooled unit is built for at-sea conditions. Although small and lightweight to provide ease of installation and maintenance, the Radome ECU is designed to exceed the cooling requirements of pleasure boat, commercial vessel, and military ship applications. Rugged construction with corrosion-resistant materials allows the unit to be operated in the most extreme conditions at sea.

The Radome ECU's highly efficient yet powerful rotary compressor provides quieter operation, increased reliability, and reduced amperage. Its raised-lance fin and the rifled tubing design of the evaporator and condenser coils provide maximum capacity. Three configurations are offered: interior dome self-contained, remoted ducted self-contained, and split-gas.

The Radome ECU is not limited to marine applications. It can also control the temperature and humidity levels of on-land locations such as electronics enclosures, telecommunications shelters, vaults, buildings, trailers, vans, and cleanrooms.

The Radome ECU is available in three configurations:

Split-gas configuration

Remote ducted self-contained (ideal for low pedestal applications)

Interior dome self-contained (exhaust kit is available for low pedestal applications to correct condenser air short cycling)

Key Benefits

- Three configurations available
- Compact, lightweight, and easy to install
- Air-cooled - no plumbing required
- Durable corrosion-resistant coating
- Environmentally safe R-417A refrigerant
- R-22 units can be retrofitted to R-417A to comply with global environmental regulations
- Reliable, solid-state digital control maintains ideal temperature
- Control circuitry monitors and protects the unit
- High-efficiency rotary compressor is quiet and reliable
- Raised lance fin and rifled tubing for maximum capacity
- Optional electric heat
- Charged, tested, and leak checked at the factory
- Charge Guard protection provides sealed access ports, ensuring environmental protection and chiller module integrity
- Meets or exceeds applicable ABYC and US Coast Guard regulations, CE directives, and general Air Conditioning and Refrigeration (ARI) standards

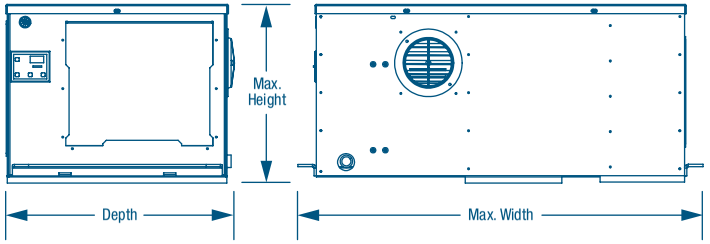
MARINE AIR SYSTEMS®
AIRRRRRRR
by Dometic GROUP

Specifications for Radome Environmental Control Units

Model [1]	HSA16K		
Capacity (BTU/h)	16000		
Voltage (V) [2]	115	230	220
Cycle (Hz)/Phase (Ph)	60/1		50/1
Full Load Amps (FLA) Cool (A)	14.34	7.2	6.9
Full Load Amps (FLA) Heat (A)	9.84	TBD	
Full Load Amps (FLA) Blower (A)	2.95	1.8	
Locked Rotor Amps (LRA) (A)	59	29	32
Optional Electric Heat (kW)	1		
Max. Circuit Breaker (A)	40	20	
Min. Circuit Ampacity (A)	25	14	13
Refrigerant Type	417A		
Max. Height (in/mm) [3]	14.5/369		
Width (in/mm) [3]	18/458		
Max. Depth (in/mm) [3]	30/762		
Net Weight (lbs/kg) [4]	99/44.1	99.35/45.1	96/43.6
Gross Weight (lbs/kg) [4]	215/97.6	106.25/48.2	115/52.2

[1] Specifications in this table are for the interior self-contained configuration. For information about different configurations please contact a Dometic Marine sales representative at 954-973-2477.
[2] 230V/60Hz unit can be operated at 200-220V/50Hz
[3] All dimensions ± 0.30 in. (8 mm).
[4] All weights ± 10%

Dimensions



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L-2132 Rev. 20130927

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Environmentally Responsible

Assembled in the USA

Dealer

NEW

Eskimo Ice EI540D Fishbox Ice System

Produces Up to 540 Pounds (245 kg) of Fishbox Ice Per Day

The Eskimo Ice EI540D system produces up to 540 lbs. (245 kg) of fishbox ice per day, roughly the same output as its larger predecessor. The EI540D ice-making machine comes in a self-contained, cube-shaped package with a 16 x 16 in. (413 x 413 mm) footprint, making it ideal for boats with limited installation space but no less demand for reliable and efficient fishbox ice production.

EI540D units are easy to install. Ice is generated minutes after starting the system, and can be conveyed up to 35 ft. (10.6 m) through an ice-delivery hose to nearly any desired location on board.

The system is operated by the Smart Logic control. The control is integrated into the electrical box which can be mounted remotely for installation flexibility. Smart Logic features a full menu of sensors and status lights monitor gas pressure, auger motor, compressor, water level, ice level, and ice clogs, and will shut off the system if problems are detected.

EI540D units feature ventilated cover panels, which can be easily removed for convenient service access from any side.

The EI540D system installation kit includes one electrical box with Smart Logic keypad/display, water filter, and 35 ft. (10.6 m) of 3/4 in. (20 mm) ID ice delivery hose and insulation. This smaller diameter hose is easier to install and less likely to kink. Units are available in 115V/60Hz, 230V/60Hz, and 220V/50Hz electrical configurations. The EI540D will support an additional remotely-mountable Smart Logic keypad/display, which can be purchased separately.

The easy-to-use Smart Logic digital control monitors all system functions.

Ventilated cover panels can be removed for service access from any side.

Key Benefits

- Produces up to 540 lbs. (245 kg) of fishbox ice per day
- Thermal expansion valve increases performance for all conditions
- Compact footprint - 16 x 16 in. (413 x 413 mm)
- Available in 50Hz and 60Hz models
- Up to two remotely-mounted Smart Logic digital controls/display panels
- Photo-electric ice-level sensor
- Fresh-water filter included in kit
- Pre-charged system
- Sensors monitor all system functions
- Monitor system and restart from any Smart Logic digital control location
- Improved fresh-water float switch
- Ventilated cover panels can be removed for maintenance access from any side
- CAN-bus compatible
- Smaller 3/4 in. (20 mm) ID ice delivery hose is easier to install, less likely to kink

Product Testimonial

"It can fill a five-gallon bucket in under an hour. It doesn't get any better. Sushi quality fish all the time."

— Capt. Glenn Morgan, Carpe Momentum

"We recently installed an Eskimo Ice machine on the Big Oh and it provides us with professionally crushed ice to keep our bait and our fish fresh while we're fishing tournaments all over the world. I would not have a boat without an Eskimo Ice maker."

— Capt. Ronnie Fields, In The Bite Magazine's 2010 Captain of the Year

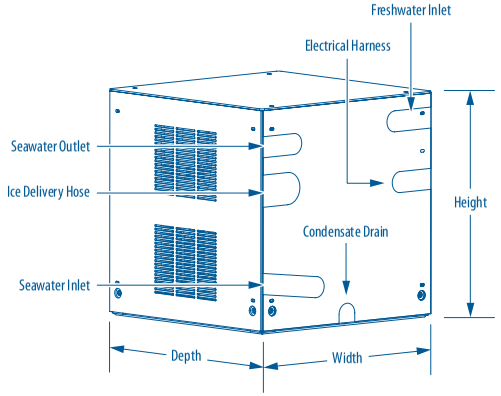
Dometic

Specifications for Eskimo Ice EI540D Fishbox Ice System

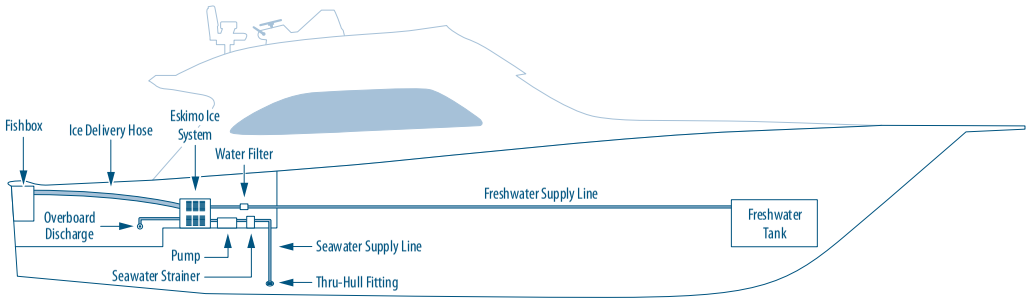
Model	EI540D		
Ice Capacity Per Day (lbs/kg) [1]	540/244.1		
Ice Capacity Per Hour (lbs/kg) [1]	22/9.1		
Voltage (V)	115	220	230
Cycle (Hz)/Phase (Ph)	60/1	50/1	60/1
Full Load Amps (FLA) Cool (A)	10.7	5.4	5.3
Locked Rotor Amps (LRA) (A)	58.8	26.3	31
Max. Circuit Breaker (A)	30	15	
Min. Circuit Ampacity (A)	18	10	
Refrigerant Type	404A		
Water Consumption Per Day/24 Hours (gpd/lpd)	64.7/244.1		
Height (in/mm) [2]	16.25/413		
Width (in/mm) [2]	16.25/413		
Depth (in/mm) [2]	16.25/413		
Seawater Inlet Connection (in)	⅝		
Net Weight (lbs/kg) [3]	82/37.2		113.9/51.7
Gross Weight (lbs/kg) [3]	87/39.5	127/57.7	128/58.1

[1] Actual capacity depends upon conditions
[2] All dimensions ± 0.30 in. (8 mm).
[3] All weights ± 10%

Dimensions



Installation



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L-3076 Rev. 20130531

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Environmentally Responsible

Assembled in the USA

Dealer

NEW

Eskimo Ice EI1000D Fishbox Ice System

Produces Up to 1,000 Pounds (454 kg) of Fishbox Ice Per Day

The Eskimo Ice EI1000D system produces up to 1000 lbs. (454 kg) of fishbox ice per day. That's nearly 42 lbs. (19 kg) of ice per hour! The EI1000D ice-making machine comes in a self-contained, compact package with a 21.25 x 21.25 in. (540 x 540 mm) footprint and a height of only 23.25 in. (591 mm), making it ideal for boats with limited installation space but a big demand for reliable and efficient fishbox ice production.

EI1000D units are easy to install. Ice is generated minutes after starting the system, and can be conveyed 50 to 70 ft. (15 to 21 m) depending on conditions and angle of run through an ice-delivery hose to nearly any desired location on board.

The system is operated by the Smart Logic control. The control is integrated into the electrical box which can be mounted remotely for installation flexibility. Smart Logic features a full menu of sensors and status lights monitor pressure faults, auger motor, compressor, water level, ice level, and ice clogs, and will shut off the system if problems are detected.

EI10000D units feature ventilated cover panels, which can be easily removed for convenient service access from any side. The unit has a sealed gear box and a totally enclosed fan-cooled (TEFC) motor.

The EI1000D installation kit includes one electrical box with Smart Logic keypad/display, water filter, and 50 ft. (21 m) of 3/4 in. (20 mm) ID ice delivery hose and insulation. This smaller diameter hose is easier to install and less likely to kink.

Units are available in a 230V/60Hz electrical configuration now, with a 220V/50Hz model coming soon. The EI1000D supports an additional remotely-mountable Smart Logic keypad/display, which can be purchased separately.

The easy-to-use Smart Logic digital control monitors all system functions.

Ventilated cover panels can be removed for service access from any side.

Special cylindrical ice shape maximizes ice density for greater cooling.

Key Benefits

- Produces up to 1,000 lbs. (454 kg) of fishbox ice per day
- Conveys ice 50 ft. (15 m) through insulated delivery hose
- Thermal expansion valve increases performance for all conditions
- Compact footprint - 21.25 x 21.25 in. (540 x 540 mm)
- Available in 230V 60Hz; 220V 50Hz model coming soon
- Up to two remotely-mounted Smart Logic digital controls/display panels
- Photo-electric ice-level sensor
- Fresh-water filter included in kit
- Pre-charged system
- Sensors monitor all system functions
- Monitor system and restart from any Smart Logic digital control location
- Improved fresh-water float switch
- Ventilated cover panels can be removed for maintenance access from any side
- CAN-bus compatible
- Sealed gear box and TEFC motor
- Smaller 3/4 in. (20 mm) ID ice delivery hose is easier to install, less likely to kink

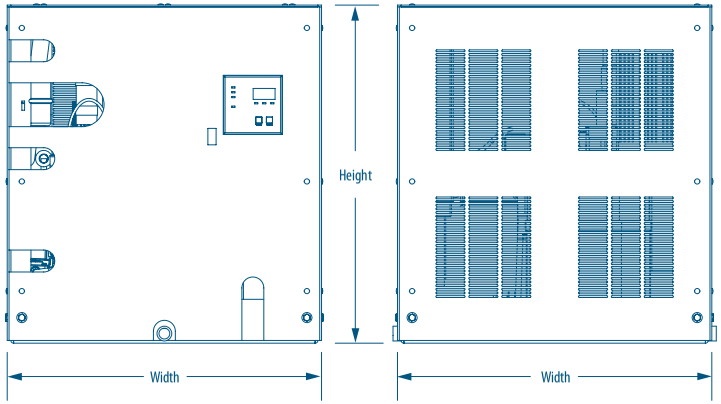
Dometic

Specifications for Eskimo Ice EI1000D Fishbox Ice System

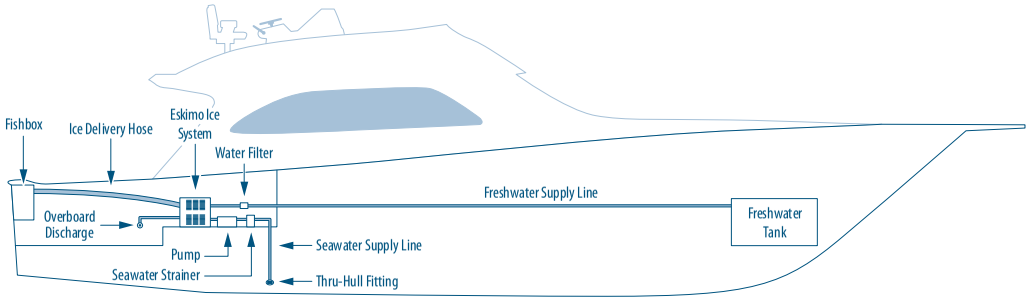
Model	EI1000D
Ice Capacity Per Day (lbs/kg) [1]	1000/453.6
Ice Capacity Per Hour (lbs/kg) [1]	42/19.1
Voltage (V) [2]	230
Cycle (Hz)/Phase (Ph)	60/1
Full Load Amps (FLA) Cool (A)	10.7
Locked Rotor Amps (LRA) (A)	58.8
Max. Circuit Breaker (A)	30
Min. Circuit Ampacity (A)	18
Refrigerant Type	404A
Water Consumption Per Day/24 Hours (gpd/lpd)	120/454.3
Height (in/mm) [3]	23.25/591
Width (in/mm) [3]	21.25/540
Depth (in/mm) [3]	21.25/540
Net Weight (lbs/kg) [4]	211/95.8
Gross Weight (lbs/kg) [4]	230/104.4

[1] Actual capacity depends upon conditions
[2] 220V/50Hz model coming soon
[3] All dimensions ± 0.30 in. (8 mm).
[4] All weights ± 10%

Dimensions



Installation



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L-3118 Rev. 20130531

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Environmentally Responsible

Assembled in the USA

Dealer

NEW

Dometic Eskimo Ice Diverter

Automatically Fill Two Fish Boxes Hands-Free

The Dometic Eskimo Ice Diverter automatically distributes ice from a single Eskimo Ice system to two separate fishboxes for maximum ice production.

The Eskimo Ice Diverter eliminates shoveling ice between fishboxes. When connected to the ice delivery hose of an Eskimo Ice system, the compact Diverter automatically or manually switches ice output from one box to the other.

Automatic Mode

- A smart electronic fishbox “Bin full” sensor alerts the Eskimo Ice system when fishbox 1 is ready and automatically activates the Diverter to switch ice output to fishbox 2.
- When fishbox 2 “Bin full” sensor automatically alerts it is ready, the Diverter again automatically switches output back to fishbox 1.
- If fishbox 1 is no longer full, then ice production and distribution continues.
- If both fishboxes are full, ice production stops until either fishbox sensor automatically indicates it is no longer full, then ice production resumes to that box.
- Automatically keeps both fishboxes as full as possible.

Manual Mode

- Select this mode if you only need to fill a second box occasionally. Manually specify whether you want ice to go into fishbox 1 or fishbox 2.

The Dometic Eskimo Ice Diverter is strong enough to avoid ice jamming. If ice is in the hose when the changeover happens, the diverter chops through it and still makes the switch.

The rear of the Diverter, showing the insulated connection for the ice delivery hose.

Key Benefits

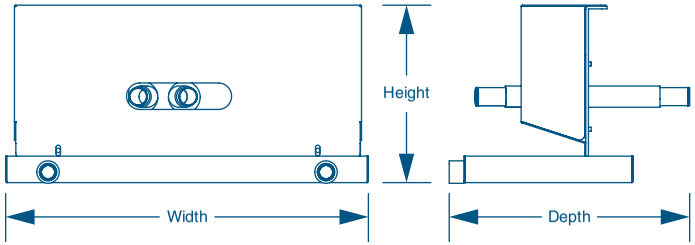
- Automatically fill two fish boxes instead of one
- Fishbox sensors automatically monitor the ice level in each box
- Electronic signals trigger the Diverter to automatically switch ice output to either fishbox
- Automatic or manual operation
- Maximize the capability of your Eskimo Ice system
- Eliminate fishbox ice shoveling

Dometic

Specifications for Eskimo Ice Diverter

Model	Power Requirements	Height (in/mm)	Width (in/mm)	Depth (in/mm)
Eskimo Ice Diverter	12V DC @ 10 Amps	8.37/213	17.12/435	11.35/289

Dimensions



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Dealer

NEW

Dometic Eskimo Ice Pusher

Fill Your Whole Ice Bin, Not Just One Side

Dometic introduces the first-ever ice pusher to keep ice machines producing ice by automatically pushing the stacked ice away from the “bin-full” sensor located in the fish box.

One big pile of ice does not mean your fish box is full. Usually the end of the fish box located away from the ice-delivery hose remains empty, but the safety sensors that prevent your boat from being flooded with ice are fooled by the large pile at the filling end and tell the ice maker to stop producing.

This important ice-stopping safety feature can be a source of frustration when sport fishermen open their fish box and find it only partially filled with ice and unable to chill what they’ve just caught. Often a deckhand is assigned to keep pushing the ice pile over, but that task can easily be forgotten when things get hectic onboard.

Working electronically, the ice pusher is activated whenever the Eskimo Ice logic controls receive a bin-full message. It slowly but powerfully extends from the side of the fish box and knocks the top off the mountain of ice. This moves ice to the empty side of the fish box and ice production is not interrupted. A safety feature prevents the pushing operation if the fish box lid is open.

Made of marine-grade stainless steel for durability, the ice pusher has a retractable cover that keeps water and falling ice from interfering with the interior mechanism as the pusher moves forward and back.

The pusher mechanism is totally sealed and can operate in the harshest marine environments, including the saltwater slurries often favored by sport-fishing captains for keeping fish pristine.

Ice piles up below the output fitting, eventually obstructing the ice level sensor "eye".

The ice pusher extends 6.5 inches (165 mm), moving the ice pile toward the opposite end of the fishbox.

The ice pusher automatically retracts, leaving a gap for uninterrupted ice production.

Key Benefits

- Redistributes ice to clear the "bin-full" sensor
- No interruption of ice production
- Produces ice for longer periods of time
- Ensures there is plenty of ice ready when you need it
- Works automatically with Eskimo Ice logic controls
- Frees deckhands to focus on more productive tasks
- Marine-grade stainless-steel parts
- Retractable cover keeps falling ice out of the mechanism
- Completely sealed pusher mechanism

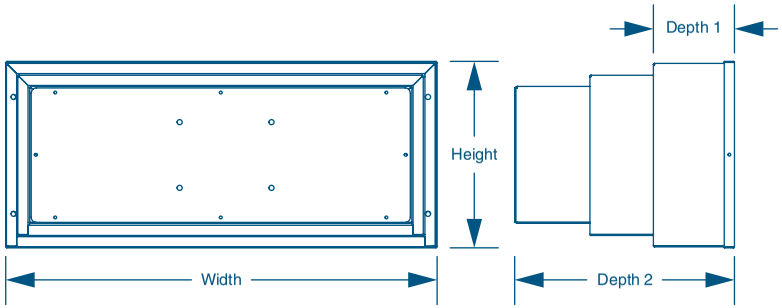
Dometic

Specifications for Eskimo Ice Pusher

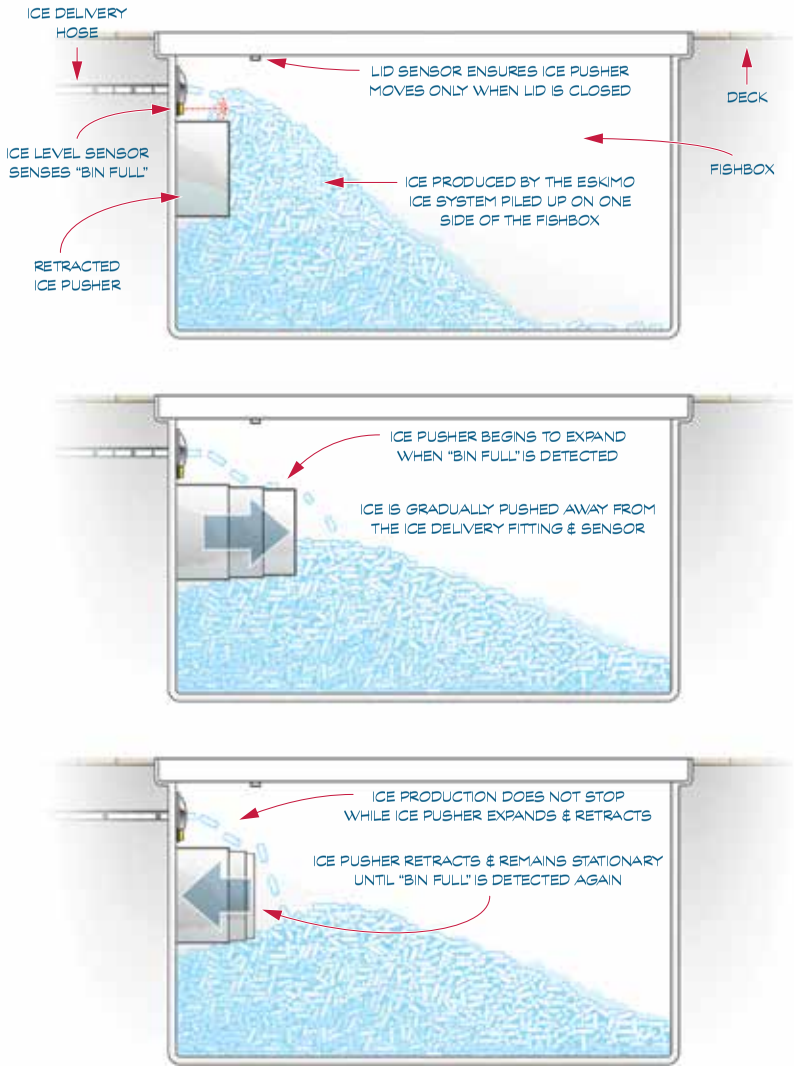
Model	Power Requirements	Height (in/mm)	Width (in/mm)	Depth 1 (in/mm) [1]	Depth 2 (in/mm) [2]
Eskimo Ice Pusher	12V DC @ 10 Amps	9.14/233	21.14/537	4.30/110	10.77/274

[1] Ice pusher depth when retracted.
[2] Ice pusher depth when fully extended.

Dimensions



How the Eskimo Ice Pusher Works


ICE DELIVERY HOSE
LID SENSOR ENSURES ICE PUSHER MOVES ONLY WHEN LID IS CLOSED
DECK
ICE LEVEL SENSOR SENSES "BIN FULL"
FISHBOX
ICE PRODUCED BY THE ESKIMO ICE SYSTEM PILED UP ON ONE SIDE OF THE FISHBOX
RETRACTED ICE PUSHER
ICE PUSHER BEGINS TO EXPAND WHEN "BIN FULL" IS DETECTED
ICE IS GRADUALLY PUSHED AWAY FROM THE ICE DELIVERY FITTING & SENSOR
ICE PRODUCTION DOES NOT STOP WHILE ICE PUSHER EXPANDS & RETRACTS
ICE PUSHER RETRACTS & REMAINS STATIONARY UNTIL "BIN FULL" IS DETECTED AGAIN

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L-3229 Rev. 20130816

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Dealer

NEW

HZB Series Portable Ice Makers

Make Up to 33 Lbs. of Ice Every 24 Hours

Dometic's HZB series of portable ice makers makes it possible to have ice where and when you need it.

Efficient HZB ice makers can produce up to 33 lbs. (15 kg) of ice every 24 hours. After turning on the unit, simply add fresh water, select the cube size, and the ice maker does the rest. Ice is ready about 14 minutes after turning on the unit.

Three cube sizes are available (HZB-15S only). Selection is made on the LED control panel, which also features low water and ice full indicators.

The removable basket holds up to 2.5 lbs. (1.1 kg) of ice. The basket is slotted on the bottom to allow water from the melting ice to flow back into the water reservoir for more ice production.

The energy saving clear window in the lid allows ice level checking without raising the lid and losing cold. HZB ice makers include an ice scoop, self-storing drain fitting, and is available in stainless-steel or black finish (HZB-12 only).

Select from three cube sizes on the HZB-15S LED control panel, which also indicates low water and ice full.

Select small or large cube size on the HZB-12S LED control panel, which also indicates empty water and full ice.

The removable ice basket is slotted to allow for water from melted ice to be recycled into more ice. Ice scoop is included.

Key Benefits

- HZB-15S makes up to 33 lbs. of ice every 24 hours
- HZB-12 makes up to 23 lbs. of ice every 24 hours
- Removable basket holds 2.5 lbs. (HZB-15S) or 1.8 lbs. (HZB-12) of ice
- Makes two (HZB-12) or three (HZB-15S only) cube sizes
- Ice is ready in about 14 minutes
- Ice full and water empty control panel indicators
- Slotted ice basket allows water from melting ice to be recycled into more ice
- Automatic shutoff when water is low
- Automatic shutoff when ice basket is full
- HZB-12 is available with black finish (HZB-12A) or stainless-steel and black finish (HZB-12SA)
- Ice scoop included
- Window in lid allows ice level checking without opening the lid and losing cold
- Convenient recessed carry handles (HZB-15S only)
- Dometic 1-Year Protection Plus warranty

Dometic

Specifications for HZB Series Portable Ice Makers

Model	Voltage	Amps	Ice Capacity Per 24 Hrs. (lbs/kg)	Ice Basket Capacity (lbs/kg)	Height (in/mm)	Width (lbs/mm)	Depth (in/mm)	Net Weight (lbs/kg)	Gross Weight (lbs/kg)
HZB-12 [1]	120VAC/60Hz	1.2	23/10.4	1.8/0.8	12.9/328	9.5/242	14.1/358	21/9.5	25/11.3
HZB-15S	120VAC/60Hz	2.4	33.0/15	2.5/1.1	17.0/432	15.0/381	17.0/432	32/14.5	42/19.1

[1] Use 'HZB-12A' for black finish or 'HZB-12SA' for black/silver finish.

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L-3209 Rev. 20131122

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Dealer

NEW

Dometic Spot Zero Water Purifier Systems

Spot-Free Washing

Dometic Spot Zero control panel with display, pressure gauges, and flow meters

Imagine a gleaming boat and a spot-free wash down with no need to go back and wipe or chamois-dry the vessel's finished surfaces.

The Dometic Spot Zero removes 95-99% of total dissolved solids (TDS) from any dock or on-board water supply. The result is soft, pure water that lets water-sprayed surfaces dry clean without leaving spots that have to be wiped away. Air-drying after a Spot Zero rinse helps preserve the boat's paint and wax finishes since "wiping away" dissolved solids can grind them into finished surfaces, creating minute scratches.

Fill your holding tanks with Dometic Spot Zero water to be used for bathing, cooking, drinking, and making crystal-clear ice on-board. Enjoy spot-free glassware, dishes, and shower surfaces, and eliminate mineral build-up in ice machines for less maintenance.

Dometic Spot Zero is a fresh-water reverse-osmosis system that comes in two models: The stand-alone SZ3000 which is installed on-board and a portable bench-sized dock box that can be stored and used dockside, lifted abord, or installed on-board. Both models have a capacity of 130 gallons per hour (492 liters per hour).

Dometic Spot Zero uses a multi-step reverse-osmosis process: Filters remove sediment, granulated activated carbon removes chlorine, chloramines and heavy metals, and a semi-permeable membrane allows the passage of water but not ions or larger molecules. In addition to eliminating 95-99% of TDS, Dometic Spot Zero also removes viruses, cysts, bacteria, and radioactive contaminants from any dock water anywhere in the world.

Removes 95-99% of total dissolved solids from any dock water supply.

Dometic Spot Zero can be installed on-board.

Available in a dock box.

Key Benefits

- Eliminates water spots
- Removes 95-99% of total dissolved solids
- Purifies dockside water
- Removes viruses, cysts, and bacteria
- No need to chamois-dry surfaces
- Stop wasting time drying by hand
- Extends wax and paint life
- Provides pure water for bathing and drinking
- Use dockside or install on-board
- Compact design
- Very low power consumption
- Very low noise and vibration
- 130 GPH (492 LPH) capacity

Special Options

- Wheels and lifting rings for the dock box

Product Testimonial

"Less soap is used in the washing machines because the water is so soft. Same in the showers — they don't have to clean so much. The ice in the ice makers is fantastic and the water tastes amazing. Outside with the guys rinsing down, Spot Zero is great. It saves the paint because they don't have to buff off any hard water. On the windows the water beads off. It's definitely a must. It saves so many headaches. I've found it's fantastic."

— Mike Baird, Chief Engineer, 164 ft. Christensen

Dometic

Specifications for Dometic Spot Zero System

Model	Amperage	Control Unit H x W x D	Control Unit Weight	Membranes H x W x D	Membranes Weight	Pre War H x W x D	Pre Filter Weight	Dock Box [1] H x W x D [1]	Dock Box Weight
SZ3000	7.5A @ 115V 4.0A @ 230V	16 x 18 x 9 in. (407 x 458 x 229 mm)	50 lbs/22.7 kg	47 x 16.5 x 6 (1,194 x 419 x 153 mm)	96 lbs/43.5 kg	17 x 17 x 10 in. (432 x 432 x 254 mm)	42 lbs/19.1 kg	25 x 54 x 22 in. (635 x 1,372 x 559 mm)	195 lbs/88 kg

[1] For dock box with wheels option add 6 in. (153 mm) to the height.

Dometic Spot Zero control panel, pre filter, and semi-permeable membranes can be installed in an onboard configuration, or...

...in a dock box option (with or without wheels).

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L-3206 Rev. 20140117

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NEW

Dometic Livos Ship-Wide Ventilation Systems

Fans, Blowers, Mist Eliminators, Dampers & Controls

Fan controls, mist eliminators, smoke and fire dampers, fans, and blowers for ship-wide ventilation systems

Dometic Livos products provide ship-wide ventilation for the commercial and pleasure boat markets. Products and systems include axial fans, centrifugal blowers, smoke and fire dampers, mist-eliminating grilles, and electronic fan controls.

Livos commercial-grade axial fans and centrifugal blowers provide cooling and/or combustion air for marine machinery spaces. Materials are chosen with corrosion resistance and weight in mind. Blades are constructed of high-strength PPG glass-reinforced polyamide, with standard powder coating of the fan housing. Fan motors are high efficiency, direct drive, and reversible. All hardware is either marine-grade aluminum or 316 stainless steel.

Smoke and fire dampers close off the engine space in the event of a fire. The lack of fresh air in conjunction with the release of fire retardant can snuff out a fire and save a boat from possibly burning to the waterline. Dampers come in both marine-grade aluminum and stainless steel.

Mist-eliminating grilles stop corrosive salt mist and water from entering the engine room. Each mist eliminator is custom designed for maximum air flow and minimum restriction for a given machinery package, keeping air flow and dimensional restrictions in mind. There are four mist eliminator drainage options: bottom draining, face draining, horizontal and sump draining.

Pressure- and temperature-monitoring fan controls are available for three-phase fans and blowers, as well as 24 VDC fans. They can be manual variable speed, temperature controlled, pressure controlled, or pressure and temperature controlled. DC controls are temperature based. All controls come standard with fire system shutdowns. Three-phase systems can also have fire damper control. Interface with central monitoring systems is optional.

3-phase axial fans available in 12-48 in. (30.5-61 cm) diameter range, with high-strength PPG glass-reinforced polyamide blades.

Mist eliminators are custom designed to maximize air flow, with four drainage options: Bottom, face, horizontal, or sump.

Smoke and fire dampers are available in marine-grade aluminum or stainless steel with manual, pneumatic (shown), or electronic operation.

Key Benefits

- Custom solutions for protecting marine machinery spaces
- Pressure- and temperature-monitoring fan controls with fire system shutdown as standard
- Fan controls available for 3-phase and 24V DC fans and blowers
- Optional central monitoring interface available for fan controls
- Smoke and fire dampers are available in marine-grade aluminum or stainless steel
- Dampers can be operated manually, pneumatically, or electronically
- Mist-eliminating grilles (demisters) are custom designed for maximum air flow and minimum restriction
- Demisters have four drainage options: Bottom, face, horizontal, or sump
- Commercial-grade fans and blowers built for optimal corrosion resistance and weight
- Blades are constructed of high-strength PPG glass-reinforced polyamide
- AC fans have powder coated housing
- Fan motors are high efficiency, direct drive, and reversible
- Marine-grade aluminum or 316 stainless-steel hardware

Dometic

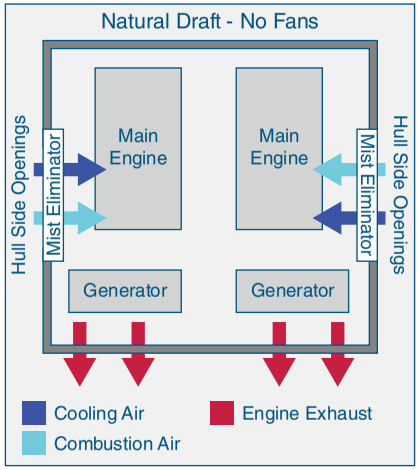
Types of Engine Ventilation Systems

Natural Draft – No Fans

A Natural-Draft ventilation system is the most basic. The main engines pull air through the mist eliminators mounted in plenum boxes just inside the hull openings. As the combustion air is exhausted, it removes heat from the space and no fans are used. A Natural-Draft system is typically used on small boats with small engine spaces.

Advantages: Simple, inexpensive, lightweight, no electrical load

Disadvantages: High temperatures at low RPM, no control of temperature, large openings and mist eliminators are needed as engine size increases to provide an acceptable pressure drop for proper engine operation

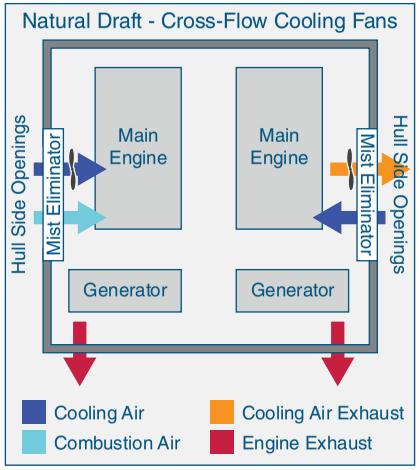


Natural Draft – Cross-Flow Cooling Fans

Commonly found on sport-fish boats from 30-80 ft. (9-24 m), a cross-flow fan arrangement is used to control the temperature of the space, and the engines pull the necessary combustion air through the mist eliminators. This system typically uses two or four DC fans or small single-phase AC fans. Four-fan systems typically use the forward fans as intakes and aft fans as exhaust which helps maintain uniform temperatures at the engine intakes. On larger vessels the fans may be 3-phase variable speed with a control that is capable of automatic temperature management.

Advantages: Simple, cost effective, lightweight, temperature is controlled during trolling and low RPM

Disadvantages: Uncontrolled fans can be noisy, with high DC current draw in some cases



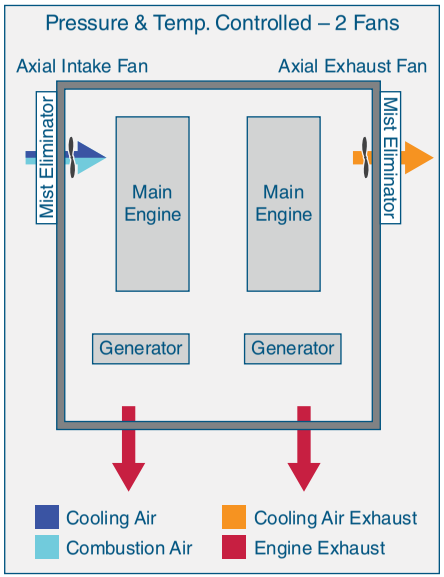
Pressure and Temperature Controlled

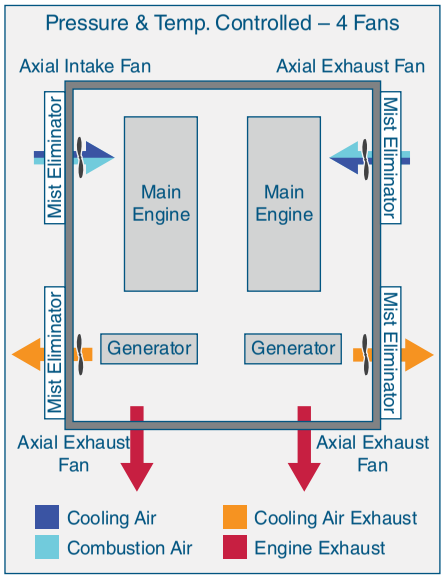
At a certain point a vessel becomes too large for small fans to be effective, and the intake and exhaust openings required for a natural-draft intake start to cause design issues because of open area needed for proper function. When this happens it's time to step up to 3-phase AC fans with variable-speed drives and a fan control.

By using intake and exhaust fans capable of supplying the required combustion and exhaust air, the static pressure created by the mist eliminators and grilles can be overcome. In addition, smaller openings relative to engine size and natural draft configuration can be used. However, an advanced Dometic Livos pressure- and temperature-monitoring fan control must be employed to maintain optimal air pressure in the engine space.

Advantages: Precise control of pressure and temperature, reduced opening and moisture eliminators size, lightweight, automatic operation both underway and dockside

Disadvantages: Fan sizing becomes critical, significant cost, complexity, large fans present packaging issues, large electrical loads





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